Monterey Regional Storm Water Management Program

Revised December 8, 2004

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Section 1

Introduction

Background

Since the passage of the Clean Water Act (CWA), the quality of our Nation's waters has improved dramatically. Despite this progress, however, degraded waterbodies still exist. According to the 1996 National Water Quality Inventory (Inventory), a biennial summary of State surveys of water quality, approximately 40 percent of surveyed U.S. waterbodies are still impaired by pollution and do not meet water quality standards. A leading source of this impairment is polluted runoff. In fact, according to the Inventory, 13 percent of impaired rivers, 21 percent of impaired lake acres and 45 percent of impaired estuaries are affected by urban/suburban storm water runoff and 6 percent of impaired rivers, 11 percent of impaired lake acres and 11 percent of impaired estuaries are affected by construction site discharges.

In 1972, the Federal Water Pollution Control Act (also referred to as the Clean Water Act [CWA]) was amended to provide that the discharge of pollutants to waters of the United States from any point source is unlawful unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. The 1987 amendments to the CWA added §402(p), which established a framework for regulating storm water discharges under the NPDES Program.

Phase I of the U.S. Environmental Protection Agency's (EPA) storm water program was promulgated in 1990 under the CWA. Phase I relies on National Pollutant Discharge Elimination System (NPDES) permit coverage to address storm water runoff from: (1) "medium" and "large" municipal separate storm sewer systems (MS4s) generally serving populations of 100,000 or greater, (2) construction activity disturbing 5 acres of land or greater, and (3) ten categories of industrial activity.

On December 8, 1999, EPA promulgated regulations known as the Storm Water Phase II Final Rule. The Phase II program expanded the Phase I program by requiring additional operators of MS4s in urbanized areas and operators of small construction sites, through the use of NPDES permits, to implement programs and practices to control polluted storm water runoff.

Purpose of the Storm Water Management Program

The purpose of the Monterey Regional Storm Water Management Program (MRSWMP) is to implement and enforce a series of management practices, referred to herein as "Best Management Practices" (BMPs). These BMPs are designed to reduce the discharge of pollutants from the municipal separate storm sewer systems to the "maximum extent

practicable," to protect water quality, and to satisfy the appropriate water quality requirements of the Clean Water Act. The achievement of these objectives will be gauged using a series of Measurable Goals, which also are contained in the MRSWMP.

The BMPs are grouped under the following six "Minimum Control Measures", which are required under the Phase II regulations:

1. Public Education and Outreach
2. Public Participation/Involvement
3. Illicit Discharge Detection and Elimination
4. Construction Site Runoff Control
5. Post-Construction Runoff Control
6. Pollution Prevention/Good Housekeeping

Content of the Monterey Regional Storm Water Management Program

The MRSWMP describes the organizational framework under which the participating entities will work together to accomplish the objectives of the Program. It contains a description, and map, of the areas to be covered by the NPDES permit for which the Program was prepared. It also describes how the BMPs and Measurable Goals will be applied and enforced within the jurisdictional boundaries of each of the participating entities.

The heart of the MRSWMP is the listing of BMPs and Measurable Goals. This list was developed by the participating entities, using the very comprehensive list of potential BMPs and Measurable Goals promulgated by EPA. The MRSWMP list contains those BMPs and Measurable Goals that the participants believe will be most useful and effective in reducing the discharge of pollutants from storm sewer systems within the particular geographic area covered by this permit.

The participating entities also used the Model Urban Runoff Program (MURP) which was completed in July of 1998. MURP is a comprehensive how-to guide developed for local governments to address the issues of polluted runoff in the urban environment. The MURP provides options to help small municipalities develop their own urban runoff programs for the Phase II process. The MURP was prepared by the City of Monterey, City of Santa Cruz, MBNMS, California Coastal Commission, Association of Monterey Bay Area Governments (AMBAG), Woodward-Clyde Consultants, and the Central Coast Regional Water Quality Control Board with money from a State 319 (h) grant. Many other local municipal agencies acted as peer reviewers throughout the development of the MURP through semi-annual meetings of the AMBAG Stormwater Task Force, now known as the Monterey Bay Stormwater Information Exchange.

Section 2

NPDES Phase II Program and Requirements

Description of the Phase II NPDES Program

The Phase II NPDES Program is intended to further reduce adverse impacts to water quality and aquatic habitat by instituting the use of controls on the unregulated sources of storm water discharges that have the greatest likelihood of causing continued environmental degradation. The environmental problems associated with discharges from MS4s in urbanized areas and discharges resulting from construction activity are outlined below.

Storm water discharges from MS4s in urbanized areas are a concern because of the high concentration of pollutants found in these discharges. Concentrated development in urbanized areas substantially increases impervious surfaces, such as city streets, driveways, parking lots, and sidewalks, on which pollutants from concentrated human activities settle and remain until a storm event washes them into nearby storm drains.

Common pollutants include pesticides, fertilizers, oils, salt, litter and other debris, and sediment. Another concern is the possible illicit connections of sanitary sewers, which can result in fecal coliform bacteria entering the storm sewer system. Storm water runoff picks up and transports these and other harmful pollutants then discharges them untreated to waterways via storm sewer systems. When left uncontrolled, these discharges can result in fish kills, the destruction of spawning and wildlife habitats, a loss in aesthetic value, and contamination of drinking water supplies and recreational waterways that can threaten public health.

Uncontrolled runoff from construction sites is a water quality concern because of the devastating effects that sedimentation can have on local waterbodies, particularly small streams. Numerous studies have shown that the amount of sediment transported by storm water runoff from construction sites with no controls is significantly greater than from sites with controls. In addition to sediment, construction activities yield pollutants such as pesticides, petroleum products, construction chemicals, solvents, asphalts, and acids that can contaminate storm water runoff. During storms, construction sites may be the source of sediment-laden runoff, which can overwhelm a small stream channel's capacity, resulting in streambed scour, streambank erosion, and destruction of near-stream vegetative cover. Where left uncontrolled, sediment-laden runoff has been shown to result in the loss of in-stream habitats for fish and other aquatic species, an increased difficulty in filtering drinking water, the loss of drinking water reservoir storage capacity, and negative impacts on the navigational capacity of waterways.

The Phase II NPDES Program contains the following six program elements, termed

"Minimum Control Measures."

1. ***Public Education and Outreach***
   Distributing educational materials and performing outreach to inform citizens about the impacts polluted storm water runoff discharges can have on water quality.
2. ***Public Participatio***n/***Involvement***
   Providing opportunities for citizens to participate in program development and implementation, including effectively publicizing public hearings and/or encouraging citizen representatives to attend storm water management program meetings.
3. ***Illicit Discharge Detection and Elimination***
   Developing and implementing a plan to detect and eliminate illicit discharges to the storm sewer system. This includes developing a system map, informing the community about hazards associated with illegal discharges and improper disposal of waste, and enforcement measures.
4. ***Construction Site Runoff Control***
   Developing, implementing, and enforcing an erosion and sediment control program for construction activities that disturb 1 or more acres of land (controls could include silt fences and temporary storm water detention ponds).
5. ***Post-Construction Runoff Control***
   Developing, implementing, and enforcing a program to address discharges of post-construction storm water runoff from new development and redevelopment areas. Applicable controls could include preventative actions such as protecting sensitive areas (e.g., wetlands) or the use of structural BMPs such as grassed swales or porous pavement.
6. ***Pollution Prevention/Good Housekeeping***
   Developing and implementing a program with the goal of preventing or reducing pollutant runoff from municipal operations. The program must include municipal staff training on pollution prevention measures and techniques, which might include such things as regular street sweeping, reduction in the use of pesticides or street salt, or frequent catch-basin cleaning.

Summary of State Phase II General Permit Requirements

General

The EPA delegated to the State Water Resources Control Board (SWRCB) the authority to administer and enforce the Phase II NPDES Program within the State of California. In 2003 the SWRCB is expected to adopt a General Permit for storm water discharges from regulated Small MS4s. An "MS4" is defined as a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains): (i) designed or used for collecting or conveying storm water; (ii) which is not a combined sewer; and (iii) which is not part of a Publicly Owned Treatment Works (POTW) as defined at Title 40 of the Code of Federal Regulations (CFR) §122.2.

A "Small MS4" is defined as an MS4 within a U.S. Census Bureau defined "urbanized area"

that is not a permitted MS4 under the Phase I regulations. This definition of a Small MS4 applies to MS4s operated within cities and counties as well as governmental facilities that have a system of storm sewers.

Federal regulations allow two permitting options for storm water discharges (individual permits and general permits). The SWRCB elected to adopt a statewide general permit in order to efficiently regulate numerous storm water discharges under a single permit. In certain situations a storm water discharge may be more appropriately and effectively regulated by an individual permit, a region-specific general permit, or by inclusion in an existing Phase I permit. In these situations, the Regional Water Quality Control Board (RWQCB) Executive Officer (EO) will direct the MS4 operator to submit the appropriate application, in lieu of a Notice of Intent to comply with the terms of this General Permit. In these situations, the individual or regional permits will govern, rather than this General Permit.

Entities Subject to the General Permit

The General Permit regulates discharges of storm water from "regulated Small MS4s." A "regulated Small MS4" is defined as a Small MS4 that discharges to a water of the U.S. or other MS4 regulated by an NPDES permit and is designated in one of the following ways:

1. Automatically designated by U.S. EPA pursuant to 40 CFR §122.32(a)(1) because it is located within an urbanized area defined by the Bureau of the Census (see Attachment 1); or
2. Individually designated by the SWRCB or RWQCB after consideration of the following factors:

a. High population density – High population density means an area with greater than 1,000 residents per square mile. Also to be considered in this definition is a high density created by a non-residential population, such as tourists or commuters.

b. High growth or growth potential –If an area grew by more than 25% between 1990 and 2000, it is a high growth area. If an area anticipates a growth rate of more than 25% over a 10-year period ending prior to the end of the first permit term, it has high growth potential.

c. Significant contributor of pollutants to an interconnected permitted MS4 – A small MS4 is interconnected with a separate permitted MS4, if storm water that has entered the Small MS4 is allowed to flow directly into a permitted MS4. In general, if the Small MS4 discharges more than 10% of its storm water to the permitted MS4, or its discharge makes up more than 10% of the other permitted MS4's total storm water volume, it is a significant contributor of pollutants to the permitted MS4. In specific cases, the MS4s involved, or third parties, may show that the 10% threshold is inappropriate for the MS4 in question.

d. Discharge to sensitive water bodies – Sensitive water bodies are receiving waters, including groundwater, which are a priority to protect. They include the following:

- Those listed as providing or known to provide habitat for threatened or endangered species;
- Those used for recreation that are subject to beach closings or health warnings; or
- Those listed as impaired pursuant to CWA §303(d) due to constituents of concern in urban runoff (these include BOD, sediment, pathogens, petroleum hydrocarbons, heavy metals, floatables, polycyclic aromatic hydrocarbons (PAHs),

trash, and other constituents that are found in the MS4 discharge). Additional criteria to qualify as a sensitive water body may exist and may be determined by the SWRCB or RWQCB on a case-by-case basis along with the MS4's designation justification.

e. Significant contributor of pollutants to waters of the United States –Specific conditions presented by the MS4 may lead to significant pollutant loading to waters of the U.S. that are otherwise unregulated or inadequately regulated. An example of such a condition may be the presence of a large transportation industry.

These factors are considered when the SWRCB evaluates whether a Small MS4 should be required to implement a storm water program that meets the provisions of the General Permit. An MS4 and the population that it serves need not meet all of the factors to be designated. These factors were chosen to target MS4s that in general have the potential to impact water quality due to conditions influencing discharges into their system or due to where they discharge.

The definition of a Small MS4 provided at §122.26(b)(16) includes systems of storm water conveyances owned or operated by the United States, a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity. This term includes systems similar to separate storm sewer systems in municipalities, such as systems at military bases, large hospital or prison complexes, and highways and other thoroughfares. This term does not include separate storm sewers in very discrete areas, such as individual buildings.

There is a wide array of governmental facilities with varying storm water conveyance structures. Some of the structures clearly form a system of conveyances similar to those in municipalities while others do not. In general, storm water structures serving public campuses (including universities, community colleges, primary schools, and other publicly owned learning institutions with campuses), military bases, and prison and hospital complexes are Small MS4s that are similar to traditional storm water systems that serve cities and counties. Those Small MS4s within or adjacent to a regulated Small, medium, or large MS4s are themselves regulated Small MS4s and are subject to an MS4 storm water permit.

There may be instances where a governmental facility does not have a storm sewer system that is similar to a traditional MS4 but is a significant source of pollutants and may be designated as a regulated Small MS4 by §122.26(a)(v).

While discharges from Small MS4s serving a city or county within the permit area of a permitted city or county will be regulated under the respective city or county permit, discharges from Small MS4s serving other governmental facilities (i.e. facilities owned and operated by the federal or state government) do not fall under the jurisdiction of the city or county and therefore may need to be permitted separately. Additionally, similar facilities operated privately are not subject to this permit because, by definition, only public entities operate Small MS4s, and the city or county has legal authority over the private entity.

Notification Requirements

As required by 40 CFR §122.33(c)(1) and the Porter-Cologne Water Quality Control Act (Porter-Cologne) §13376, regulated Small MS4s automatically designated because they are within an urbanized area must submit to the appropriate RWQCB by March 10, 2003, a Notice of Intent (NOI) to comply with the terms of the General Permit, a Storm Water Management Program (SWMP), and a fee.

Regulated Small MS4s that fail to obtain coverage under this General Permit will be in violation of the CWA and the Porter-Cologne Water Quality Control Act.

Once the RWQCB has approved its SWMP, a regulated Small MS4 will be considered to be permitted. The MS4 shall then begin implementing its SWMP. The Permittee may subsequently propose to the RWQCB changes in its SWMP. The RWQCB may also request changes to the SWMP, if it deems it appropriate in order to achieve compliance with the General Permit.

Section 3

Regional Permit Organization

Memorandum of Agreement for the Monterey Regional Storm Water Pollution Prevention Program

As mentioned in Section 2, the EPA has delegated authority to the SWRCB to administer and enforce the Phase II NPDES permit process within California. In turn the SWRCB has delegated permitting authority to the California Regional Water Quality Control Board – Central Coastal Basin (RWQCB-CCB) to administer the NPDES permit process within the area that this MRSWMP will be performed.

Since the Phase II Storm Water Regulations would affect most, if not all, of the member entities of the Monterey Regional Water Pollution Control Agency (MRWPCA), MRWPCA's Board of Directors directed its staff to determine if it could assist these entities in complying with these regulations.

A Working Group, comprised of public works representatives from each of MRWPCA's member entities, was formed in March 2000, and held a series of meetings. The purpose of the Working Group was to evaluate the feasibility and potential benefits of obtaining a Regional Permit, rather than individual entity permits, for those entities that would be subject to the Phase II permit requirements. The Working Group discussed and investigated a number of regional storm water permitting issues, and concluded that it would be mutually beneficial for the affected entities to band together and apply as co-permittees under a single General Permit.

To formalize this regional approach, in mid-2002 a "Memorandum of Agreement for the Monterey Regional Storm Water Pollution Prevention Program" was prepared and executed by the MRWPCA and by nine entities in the southern Monterey Bay area. The purpose of the Agreement was to create the administrative organization, responsibilities, and commitments to develop a regional storm water program and to cooperate to efficiently and economically comply with the Phase II NPDES requirements. The term of the Agreement commenced on the date the last permittee executed it in late 2002, and will terminate upon the expiration of the first NPDES Phase II storm water permit that is issued, unless this term is extended by the permittees.

The following are the key elements of the MRSWMP that has been developed under this Agreement:

- The purpose of the Program is to reduce pollution from storm water discharges and runoff. By doing this the Program is intended to fulfill the obligations of the permittees with regard to EPA's Phase II Storm Water NPDES requirements, and is to be a collective

effort and implementation of area-wide activities, designed to benefit all permittees.

- A Management Committee was created to provide for overall Program coordination, review, and budget oversight, with respect to the NPDES Permit, and Bylaws were adopted. The Management Committee acts as the official management and oversight body for the Program, providing direction and guidance for the Program and the Program budget which will be adopted for each fiscal year. The Management Committee establishes timelines and budgets for completion of Program tasks.
- Unless otherwise advised by the Program Attorney, meetings of the Management Committee, including any closed sessions with the Program Attorney, will be conducted in accordance with the "Brown Act" (Government Code Section 54950 et seq.). This provides the public the opportunity to participate in the development and conduct of the program.
- The Management Committee selected the MRWPCA to be the initial Program Manager for the Program. As used in the Agreement, the term "Program Manager" has the same meaning as the term "Lead Agency" as defined in the Notice of Intent forms included in Appendix A. Although the MRWPCA itself is not required to be covered by a Phase II NPDES Permit, as Program Manager, the MRWPCA is responsible for Program management and administration, Permit management, technical program management, and related duties. The MRWPCA is not responsible for providing program management services related to individual Permittee's permit programs, but may provide such services under separate contracts with any of the permittees.
- Each of the permittees will be responsible for performing the following duties on behalf of its own jurisdiction:
  - Comply with the NPDES Permit conditions that apply within its jurisdictional boundaries
  - Participate in Management Committee meetings and other required meetings of the permittees
  - Implement its Community-Specific Program
  - Provide reports to the Program Manager for purposes of reporting, on a joint basis, compliance with applicable provisions of the NPDES Permit and the status of Program implementation
  - Individually address inter-agency issues, agreements or other cooperative efforts.

A complete copy of the Agreement is contained in Appendix B.

Participating Entities

The following entities are signatories to the Agreement and are participants in the Monterey Regional Storm Water Management Program:

City of Pacific Grove, a municipal corporation of the State of California;
City of Monterey, a municipal corporation of the State of California;
City of Seaside, a municipal corporation of the State of California;

City of Sand City, a municipal corporation of the State of California;
City of Del Rey Oaks, a municipal corporation of the State of California;
City of Marina, a municipal corporation of the State of California;
City of Carmel-by-the-Sea, a municipal corporation of the State of California;
County of Monterey, a political subdivision of the State of California, and
Pebble Beach Company, a California general partnership.

Coordinating Entities

The Monterey Peninsula Unified School District, the Pacific Grove Unified School District, and the Carmel Unified School District have indicated their desire and intent to coordinate certain of their individual SWMP activities with those of the MRSWMP. These activities are expected to involve Minimum Control Measures 1 and 2 (Public Education and Outreach and Public Participation and Involvement). As of the date of preparation of this MRSWMP these Districts had contributed to the costs of preparing the Public Education and Outreach Program described in Appendix E, and the Public Participation and Involvement Program Described in Appendix F. In addition representatives from these Districts frequently attend the regular meetings of the MRSWMP Management Committee.

Permit Boundary

The boundary of the area within which the MRSWMP will be carried out is as follows:

- For the participating entities that are incorporated cities, the MRSWMP will be carried out throughout the area bounded by its legal jurisdictional boundary, except within those areas over which the entity does not have jurisdiction. Such areas include, but are not limited to:
  - Federal Facilities including the U.S. Defense Language Institute, the U.S. Naval Postgraduate School and its facilities and housing areas, and the Ord Military Community at the former Fort Ord.
  - School districts including the Pacific Grove, Monterey Peninsula, and Carmel Unified School Districts
  - Colleges and universities including Monterey Peninsula College, California State University at Monterey Bay, and the University of California at Santa Cruz
  - Miscellaneous other facilities including the Monterey Peninsula Airport and the Monterey Fairgrounds
- For the County of Monterey, the MRSWMP will be carried out in all of the unincorporated areas which have been designated by the U.S. Census Bureau as being “Urbanized Areas” and which are within the County’s legal jurisdictional boundary

- For the Pebble Beach Company, the MRSWMP will be carried out throughout the area over which it has ownership rights in the area commonly known as Del Monte Forest

Figure 3-1 shows the geographic areas covered by the MRSWMP.

Applicability of Storm Water Pollution Prevention BMPs and Measurable Goals

Except as noted in the following section titled "Areas of Special Biological Significance," the BMPs and Measurable Goals will be applied to all of the areas described above, as shown in Figure 3-1.

For the cities there are legal descriptions of their jurisdictional boundaries. If necessary, these can be used to precisely determine the geographic extent of a city's obligation to carry out the BMPs and Measurable Goals.

For the County, since there are no legal descriptions of the boundaries of the Urbanized Areas, the boundaries will be as shown in Figures 3-2 through 3-4, which are blowups of the Urbanized Area maps as provided by the U.S.Census Bureau. These maps have sufficient detail related to geographic features, such as roads, so that, if necessary, they can be used to precisely determine the geographic extent of the County's obligation to carry out the BMPs and Measurable Goals. The BMPs and Measurable Goals of the MRSWMP will not be carried out in any other unincorporated areas of the County, since those areas are not subject to the requirements of the Phase II NPDES Program.

For the Pebble Beach Company there are legal descriptions of the Del Monte Forest. If necessary, these can be used to precisely determine the geographic extent of the Pebble Beach Company's obligation to carry out the BMPs and Measurable Goals.

Areas of Special Biological Significance

On March 21, 1974, the State Water Resources Control Board (SWRCB), in Resolution No. 74-28, designated 31 Areas of Special Biological Significance (ASBS). Subsequently, the SWRCB designated three additional ASBS for a total of 34. Some of the storm water discharges from some of the Permittees discharge into ASBS. Since 1983, the Ocean Plan has prohibited waste discharges to ASBS. Similar to previous versions of the Ocean Plan, the 2001 Ocean Plan (Resolution No. 2000-108) states: "Waste shall not be discharged to areas designated as being of special biological significance. Discharges shall be located a sufficient distance from such designated areas to assure maintenance of natural water quality conditions in these areas."

Assembly Bill 2800, the Marine Managed Areas Improvement Act, was signed by former Governor Davis on September 8, 2000. This law added sections to the Public Resources Code (PRC) that are relevant to ASBS. Section 36700 (f) of PRC now defines a state water quality protection area as "a nonterrestrial marine or estuarine area designated to protect marine species or biological communities from an undesirable alteration in natural water quality, including, but not limited to, areas of special biological significance that have been designated by the State Water Resources Control Board through its water quality control planning process." Section 36710 (f) of PRC states: "In a state water quality protection area point source waste and thermal discharges shall be prohibited or limited by special conditions. Nonpoint source pollution shall be controlled to the extent practicable. No other use is restricted." The classification of ASBS as State Water Quality Protection Areas (SWQPAs) went into effect on January 1, 2003 pursuant to section 36750 of PRC.

Section III (I)(1) of the 2001 Ocean Plan states: "The SWRCB may, in compliance with the California Environmental Quality Act, subsequent to a public hearing, and with the concurrence of the Environmental Protection Agency, grant exceptions where the SWRCB determines: a. The exception will not compromise protection of ocean waters for beneficial uses, and, b. The public interest will be served."

The Permittees that have storm water discharges into ASBS will work with SWRCB and RWQCB staff to determine whether or not these discharges can continue through issuance by the SWRCB of an exception to the ASBS discharge prohibition in the 2001 Ocean Plan. If an exception is granted, it is expected that there will be requirements issued with the exception, which the affected Permittees will incorporate into their Storm Water Management Programs. If an exception is not granted, then those Permittees will take other steps to comply with the applicable regulations pertaining to discharges into ASBS.

Section 4

Best Management Practices and Measurable Goals

Description of the Six Minimum Measures

As required by the Final Phase II NPDES General Permit No. CAS000004 adopted by the SWRCB on April 30, 2003, Storm Water Management Plans (SWMPs) must address the six "Minimum Control Measures" that are described in general in Section 2, and described in more detail below.

The MRSWMP will implement and enforce a program designed to reduce the discharge of pollutants from the municipal separate storm sewer systems of the participating entities (permittees) to the "maximum extent practicable" (MEP) to protect water quality. According to the General Permit, the MEP standard is an ever-evolving, flexible, and advancing concept, which considers technical and economic feasibility. As knowledge about controlling urban runoff continues to evolve, so does that which constitutes MEP. Reducing the discharge of storm water pollutants to MEP in order to protect beneficial uses requires review and improvement, which includes seeking new opportunities. To do this, the Permittee must conduct and document evaluation and assessment of each relevant element of its program and revise activities, control measures, BMPs, and measurable goals, as necessary to meet MEP.

For each of these six Minimum Control Measures there are BMPs and associated Measurable Goals that will be implemented during the course of the permit term. It is through the implementation and evaluation of these BMPs and Measurable Goals that the Permittees will ensure that the objectives of the Phase II NPDES Program will be met within the permit boundary of the MRSWMP.

SWMPs must describe BMPs, and associated measurable goals, that will fulfill the requirements of the following six Minimum Control Measures. The measurable goals must include, as appropriate, the months and years for scheduled actions, including interim milestones and frequency of the action.. A more detailed discussion of the Minimum Control Measures, and why they are necessary, is provided below. The specific requirements, taken directly from the Final Phase II NPDES General Permit, are shown below under the headings "What is Required".

1. Public Education and Outreach

What is Required?

To satisfy this minimum control measure, the Permittee must:

1. Implement a public education program to distribute educational materials to the community or conduct equivalent outreach activities about the impacts of storm water discharges on water bodies and the steps that the public can take to reduce pollutants in storm water runoff.
2. Determine the appropriate BMPs and measurable goals for this minimum control measure.

Why is it Necessary?

According to the Fact Sheet published by U.S. EPA regarding the *Public Education and Outreach* Minimum Measure, an informed and knowledgeable community is crucial to the

success of a storm water management program since it helps to ensure the following:

1. Greater support for the program as the public gains a greater understanding of the reasons why it is necessary and important. Public support is particularly beneficial when operators of small MS4s attempt to institute new funding initiatives for the program or seek volunteers to help implement the program.

2. Greater compliance with the program as the public becomes aware of the personal responsibilities expected of them and others in the community, including the individual actions they can take to protect or improve the quality of area waters.

2. Public Participation/Involvement

What is Required?

To satisfy this minimum control measure, the Permittee must:

1. At a minimum comply with state and local public notice requirements when implementing a public involvement/participation program.
2. Determine the appropriate best management practices (BMPs) and measurable goals for this minimum control measure.

Why is it Necessary?

According to the Fact Sheet published by U.S. EPA regarding the Public Participation/Involvement Minimum Measure, the public can provide valuable input and assistance to a regulated small MS4's municipal storm water management program and, therefore, suggests that the public be given opportunities to play an active role in both the development and implementation of the program. An active and involved community is crucial to the success of a storm water management program because it allows for:

1. Broader public support since citizens who participate in the development and decision making process are partially responsible for the program and, therefore, may be less likely to raise legal challenges to the program and more likely to take an active role in its implementation.

2. Shorter implementation schedules due to fewer obstacles in the form of public and legal challenges and increased sources in the form of citizen volunteers.

3. A broader base of expertise and economic benefits since the community can be a valuable, and free, intellectual resource.

4. A conduit to other programs as citizens involved in the storm water program development process provide important cross-connections and relationships with other community and government programs. This benefit is particularly valuable when trying to implement a storm water program on a watershed basis, as encouraged by EPA.

3. Illicit Discharge Detection and Elimination

What is Required?

To satisfy this minimum control measure, the Permittee must:

1. Develop, implement, and enforce a program to detect and eliminate illicit discharges (as defined at 40 CFR §122.26(b)(2)) into the regulated small MS4.
2. Develop, if not already completed, a storm sewer system map, showing the location of all outfalls and the names and locations of all waters of the U.S. that receive discharges from those outfalls.
3. To the extent allowable under State or local law, effectively prohibit, through ordinance, or other regulatory mechanism, non-storm water discharges into the MS4 and implement appropriate enforcement procedures and actions. Develop and implement a plan to detect

and address non-storm water discharges, including illegal dumping, to the system that are not authorized by a separate NPDES permit. Inform public employees, businesses, and the general public of the hazards that are generally associated with illegal discharges and improper disposal of waste.

4. Address the following categories of non-storm water discharges or flows only where they are identified as significant contributors of pollutants to the small MS4.
   a. waterline flushing
   b. landscape irrigation
   c. diverted stream flows
   d. rising groundwaters
   e. uncontaminated groundwater infiltration to separate storm sewers
   f. uncontaminated pumped groundwater
   g. discharges from potable water sources
   h. foundation drains
   i. air-conditioning condensation
   j. irrigation water
   k. springs
   l. water from crawl space pumps
   m. footing drains
   n. lawn watering
   o. individual residential car washing
   p. flows from riparian habitats and wetlands
   q. dechlorinated swimming pool discharges
5. Determine the appropriate BMPs and Measurable Goals for this minimum control measure.

Why is it Necessary?

According to the Fact Sheet published by U.S. EPA regarding the *Illicit Discharge Detection and Elimination* Minimum Measure, discharges from MS4s often include wastes and wastewater from non-storm water sources. EPA reports that a study conducted in 1987 in Sacramento, California, found that almost one-half of the water discharged from a local MS4 was not directly attributable to precipitation runoff. A significant portion of these dry weather flows were from illicit and/or inappropriate discharges and connections to the MS4. Illicit discharges enter the system through either direct connections (e.g., wastewater piping either mistakenly or deliberately connected to the storm drains) or indirect connections (e.g., infiltration into the MS4 from cracked sanitary systems, spills collected by drain outlets, or paint or used oil dumped directly into a drain). The result is untreated discharges that contribute high levels of pollutants, including heavy metals, toxics, oil and grease, solvents, nutrients, viruses, and bacteria to receiving waterbodies. Pollutant levels from these illicit discharges have been shown in EPA studies to be high enough to significantly degrade receiving water quality and threaten aquatic, wildlife, and human health.

4. Construction Site Runoff Control

What is Required?

To satisfy this minimum control measure, the Permittee must:

1. Develop, implement, and enforce a program to reduce pollutants in any storm water runoff to the Small MS4 from construction activities that result in a land disturbance of greater

than or equal to one acre. Reduction of storm water discharges from construction activity disturbing less than one acre must be included in your program if that construction activity is part of a larger common plan of development or sale that would disturb one acre or more.

2. Include in the program development and implementation of, at a minimum:
   a. An ordinance or other regulatory mechanism to require erosion and sediment controls, as well as sanctions, or other effective mechanisms, to ensure compliance, to the extent allowable under State, or local law;
   b. Requirements for construction site operators to implement appropriate erosion and sediment control BMPs;
   c. Requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality;
   d. Procedures for site plan review which incorporate consideration of potential water quality impacts;
   e. Procedures for receipt and consideration of information submitted by the public; and
   f. Procedures for site inspection and enforcement of control measures.
3. Determine the appropriate best management practices (BMPs) and measurable goals for this minimum control measure.

Why is it Necessary?

According to the Fact Sheet published by U.S. EPA regarding the Construction Site Runoff Control Minimum Measure, polluted storm water runoff from construction sites often flows to MS4s and ultimately is discharged into local rivers and streams. Of the pollutants listed in the table below, sediment is usually the main pollutant of concern. Sediment runoff rates from construction sites are typically 10 to 20 times greater than those of agricultural lands, and 1,000 to 2,000 times greater than those of forestlands. During a short period of time, construction sites can contribute more sediment to streams than can be deposited naturally during several decades. The resulting siltation, and the contribution of other pollutants from construction sites, can cause physical, chemical, and biological harm to our nation's waters. For example, excess sediment can quickly fill rivers and lakes, requiring dredging and destroying aquatic habitats.

Pollutants commonly discharged from construction sites include:

Sediment
Solid and sanitary wastes
Phosphorous (fertilizer)
Nitrogen (fertilizer)
Pesticides
Oil and grease
Concrete truck washout
Paint, plaster washout

5. Post-Construction Runoff Control

What is Required?

To satisfy this minimum control measure, the Permittee must:

1. Develop, implement, and enforce a program to address storm water runoff from new

development and redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale, that discharge into the Small MS4 by ensuring that controls are in place that would prevent or minimize water quality impacts;
2. Develop and implement strategies, which include a combination of structural and/or non-structural BMPs appropriate for your community;
3. Use an ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects to the extent allowable under State or local law For those Small MS4s described in Supplemental Provision E, the requirements must at least include the design standards contained in Attachment 4 of the General Permit or a functionally equivalent program that is acceptable to the appropriate RWQCB;
4. Ensure adequate long-term operation and maintenance of BMPs.
5. Determine the appropriate best management practices (BMPs) and measurable goals for this minimum control measure.
6. Note: The General Permit does not require redesign of K-12 school or community college facilities that have been submitted to the Department of General Services, Division of the State Architect before adoption of the permit, and which receive final approval from the State Allocation Board or the Public Works Board, as appropriate, on or before December 31, 2004

Why is it Necessary?

According to the Fact Sheet published by U.S. EPA regarding the *Post-Construction Runoff Control* Minimum Measure, post-construction storm water management in areas undergoing new development or redevelopment is necessary because runoff from these areas has been shown to significantly effect receiving waterbodies. Many studies indicate that prior planning and design for the minimization of pollutants in post-construction storm water discharges is the most cost-effective approach to storm water quality management.

There are generally two forms of substantial impacts of post-construction runoff. The first is caused by an increase in the type and quantity of pollutants in storm water runoff. As runoff flows over areas altered by development, it picks up harmful sediment and chemicals such as oil and grease, pesticides, heavy metals, and nutrients (e.g., nitrogen and phosphorus). These pollutants often become suspended in runoff and are carried to receiving waters, such as lakes, ponds, and streams. Once deposited, these pollutants can enter the food chain through small aquatic life, eventually entering the tissues of fish and humans. The second kind of post-construction runoff impact occurs by increasing the quantity of water delivered to the waterbody during storms. Increased impervious surfaces interrupt the natural cycle of gradual percolation of water through vegetation and soil. Instead, water is collected from surfaces such as asphalt and concrete and routed to drainage systems where large volumes of runoff quickly flow to the nearest receiving water. The effects of this process include streambank scouring and downstream flooding, which often lead to a loss of aquatic life and damage to property.

6. Pollution Prevention/Good Housekeeping

What is Required?

To satisfy this minimum control measure, the Permittee must:

1. Develop and implement an operation and maintenance program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from

municipal operations;
2. Using training materials that are available from U.S. EPA, the State, or other organizations, the program must include employee training to prevent and reduce storm water pollution from activities such as park and open space maintenance, fleet building maintenance, new construction and land disturbances, and storm water system maintenance;
3. Determine the appropriate best management practices (BMPs) and measurable goals for this minimum control measure.

Why is it Necessary?

According to the Fact Sheet published by U.S. EPA regarding the *Pollution Prevention/Good Housekeeping* Minimum Measure, the pollution prevention/good housekeeping for municipal operations is a key element of the small MS4 storm water management program. This measure requires the small MS4 operator to examine and subsequently alter their own actions to help ensure a reduction in the amount and type of pollution that: (1) collects on streets, parking lots, open spaces, and storage and vehicle maintenance areas and is discharged into local waterways, and (2) results from actions such as environmentally damaging land development and flood management practices or poor maintenance of storm sewer systems. While this measure is meant primarily to improve or protect receiving water quality by altering municipal or facility operations, it also can result in a cost savings for the small MS4 operator, since proper and timely maintenance of storm sewer systems can help avoid repair costs from damage caused by age and neglect.

Requirements for BMPs and Measurable Goals

The following are excerpts from the SWRCB's Fact Sheet describing the content and requirements of the General Order:

> " SWMPs must describe how pollutants in storm water runoff will be controlled and describe BMPs that address the six Minimum Control Measures. Each BMP must have accompanying measurable goals that will be achieved during the permit term, or within five years of designation if designated subsequent to permit adoption, as a means of determining program compliance and accomplishments and as an indicator of potential program effectiveness. The measurable goals should be definable tasks such as number of outreach presentations to make, number of radio spots to purchase, or percentage of pollutant loading to reduce (other examples of measurable goals can be found on U.S. EPA's web-site at http://cfpub.epa.gov/npdes/stormwater/measurablegoals/index.cfm). This approach provides the flexibility to target an MS4's problem areas while working within the existing organization."
>
> "It is not anticipated that the SWMP be fully implemented upon submittal with the NOI. It is the intent of this General Permit that SWMPs submitted with the NOI contain sufficient information such that RWQCB staff and interested parties understand the BMPs that will be implemented or will be developed and implemented over the course of the General Permit term or, for Small MS4s designated subsequent to permit adoption, over a five–year period from designation. It is also expected that SWMPs will protect water quality, contain measurable goals and schedules, and assign responsible parties for

each BMP. It is anticipated that the SWMP initially submitted may be revised or modified based on review of RWQCB staff or on comments provided by interested parties in accordance with Provisions G and H.19 of the General Permit."

"For example, it may be proposed that a storm water logo be developed (or an existing one modified) by the end of the first year; an ordinance prohibiting non-storm water discharges be adopted by the end of the second year; a survey of non-storm water discharges throughout the city be completed by the end of the second year; a brochure targeting the restaurant community regarding proper practices to eliminate non-storm water discharges be developed or obtained by the end of the fourth year; and the brochure be distributed to 25 percent of the restaurants within the city during health department inspections by the end of the fifth year. (This example mentions only one activity each year. In fact, numerous activities will occur throughout the permit term that ensure that a SWMP addressing all six Minimum Control Measures is implemented by the end of the permit term, or within five years of designation for Small MS4s designated subsequent to adoption of the Permit.)"

"Many of the activities that a municipality already does can be recognized as a benefit to storm water or can be modified to add a storm water quality twist. A critical element of SWMP development is an assessment of activities already being conducted. For example, many communities already have a household hazardous waste program, which can be assumed. to reduce illicit discharges to the MS4."

"The MS4 has the flexibility to target specific segments of its residential or employee population in ways that are most appropriate for that particular segment."

"In accordance with 40 CFR section 122.34(d)(2), SWRCB provides U.S. EPA's menu of BMPs to consider when developing a SWMP. This menu is available on U.S. EPA's internet site at http://cfpub1.epa.gov/npdes/stormwater/swphase2.cfm?program_id=6. The menu provides examples of BMPs and associated measurable goals; however, other BMPs and measurable goals may be used."

Selection of BMPs and Measurable Goals

The entities that are participants in the MRSWMP worked as a group to carefully review EPA's extensive list of potential BMPs and Measurable Goals (referred to above) for all six of the Minimum Control Measures. This group also referred to the Model Urban Runoff Program (MURP) which is a comprehensive how-to guide developed for local governments to address the issues of polluted runoff in the urban environment. The MURP provides options to help small municipalities develop their own urban runoff program for the Phase II process. The guide incorporates the essential elements of a strong urban runoff program with examples of ordinances, best management practices, illicit connections, new development and redevelopment, commercial and industrial facilities, reporting forms and an education and outreach program. The MURP was prepared by the City of Monterey, City of Santa Cruz, MBNMS, California Coastal Commission, Association of Monterey Bay Area Governments (AMBAG), Woodward-Clyde Consultants, and the Central Coast Regional Water Quality Control Board with money

from a State 319 (h) grant. Many other local municipal agencies acted as peer reviewers throughout the development of the MURP through semi-annual meetings of the AMBAG Stormwater Task Force, now known as the Monterey Bay Stormwater Information Exchange.

This group then identified those BMPs and Measurable Goals that they felt would be most useful and effective in reducing the discharge of pollutants from storm sewer systems within the particular geographic area covered by the MRSWMP. The process of reviewing and selecting BMPs and Measurable Goals was carried out in a series of public meetings. Public input was received during those meetings, and was taken into consideration as part of the selection process.

The following is a description of the process used by the group to identify these BMPs and Measurable Goals:

1. Three subcommittees of two or more group members were formed. Each subcommittee was assigned to work on two of the Six Minimum Measures, and was given the task of recommending to the full group those BMPs and Measurable Goals that should be selected for those Minimum Measures.
2. Each subcommittee member was provided complete copies of these documents for their use in carrying out their assignments: EPA's "Storm Water Phase II Final Rule Fact Sheets", EPA's "Measurable Goals Guidance for Phase II Small MS4s", and EPA's "National Menu of Best Management Practices for Storm Water Phase II".
3. These documents provided far more information than was applicable to the area covered by the MRSWMP, so the subcommittees limited their considerations to those pertinent to the geographical region covered by the MRSWMP:

   Coastal California Communities
   Temperate Climate
   Residential, Commercial, light Industrial
   High Level of Tourist Activity
   High Dependence on Automobiles
   Existence of the Monterey Bay National Marine Sanctuary

4. Some of EPA's suggested measurable parameters were clearly not relevant, such as "Road Salt Application and Storage". Others did not appear to apply to the MRSWMP's geographic region, or were ambiguous in how they could be measured.
5. Subcommittee members then used their professional judgement and past experience to screen the number of BMPs and Measurable Goals down to a manageable level. This resulted in a first draft that consisted of 70 BMP's and 132 Measurable Goals.
6. At a subsequent meeting of the group, these BMPs and Measurable Goals were further screened to produce a final list consisting of 27 BMPs and 42 Measurable Goals. This final list was included as Table 4-1 in the first draft of the Monterey Regional Storm Water Management Program dated March 3, 2003.
7. After the SWRCB posted the first draft version of the MRSWMP on its website for public review, comments were submitted by several organizations. With coordination and assistance from the RWQCB, the Management Committee prepared revisions to MRSWMP, and revised the list of BMPs and Measurable Goals, in response to those comments. The revised BMP and Measurable Goals list is contained in Table 4-1 of this October 27, 2004

version of the MRSWMP.

The Permittees believe that the list contained in Table 4-1 constitutes a good program for the first 5-year permit cycle, and that it meets the requirements and objectives of the General Permit.

In identifying those BMPs and Measurable Goals they felt would be most useful and effective, the group took into account general information on storm water pollutants of concern compiled by Federal and State agencies, and the available data on specific storm water quality and pollutants of concern in the geographic area covered by the MRSWMP. This information is summarized below.

General Information on Storm Water Pollutants of Concern

Background

Urban runoff carrying non-point source pollution is widely regarded as the nation's leading threat to water quality. Pollutants may include toxic metals, hydrocarbons, nutrients, suspended solids, and many other chemicals that are detrimental to aquatic life. Urbanization and increases in population directly affect the type of pollution that enters storm drains. Impermeable surfaces such as roads, prevent storm water from soaking into the ground. These surfaces become conduits for pollutants. Some examples include oil and grease that wash off roads, fertilizers and pesticides from lawns, and detergents from car washing and commercial activities.

Sediment

Sediment is a common component of stormwaters, and can be a pollutant. Sediment can be detrimental to aquatic life (primary producers, benthic invertebrates, and fish) by interfering with photosynthesis, respiration, growth, reproduction, and oxygen exchange in water bodies. Sediment can transport other pollutants that are attached to it including nutrients, trace metals, and hydrocarbons. Sediment is the primary component of total suspended solids (TSS), a common water quality analytical parameter.

Nutrients

Nutrients including nitrogen and phosphorous are the major plant nutrients used for fertilizing landscapes, and are often found in stormwater. These nutrients can result in excessive or accelerated growth of vegetation, such as algae, resulting in impaired use of water in lakes and other sources of water supply. For example, nutrients have led to a loss of water clarity in Lake Tahoe. In addition, un-ionized ammonia (one of the nitrogen forms) can be toxic to fish.

Bacteria and Viruses

Bacteria and viruses are common contaminants of stormwater. For separate storm drain systems, sources of these contaminants may include animal excrement, decomposing plant matter, and sanitary sewer overflow. High levels of indicator bacteria in stormwater have led to the closure of beaches, lakes, and rivers to contact recreation such as swimming.

Oil and Grease

Storm water often carries oil and grease that contain a wide array of hydrocarbon compounds, some of which are toxic to aquatic organisms at low concentrations. Sources of oil and grease include leakage, spills, cleaning and sloughing associated with vehicle and equipment engines

and suspensions, leaking and breaks in hydraulic systems, restaurants, and waste oil disposal.

Metals
Metals including lead, zinc, cadmium, copper, chromium, and nickel are commonly found in stormwater. Many of the artificial surfaces of the urban environment (e.g., galvanized metal, paint, automobiles, or preserved wood) contain metals, which enter stormwater as the surfaces corrode, flake, dissolve, decay, or leach. Over half the trace metal load carried in stormwater is associated with sediments. Metals are of concern because they are toxic to aquatic organisms, can bioaccumulate (accumulate to toxic levels in aquatic animals such as fish), and have the potential to contaminate drinking water supplies.

Organics
Organics may be found in stormwater in low concentrations. Often synthetic organic compounds (adhesives, cleaners, sealants, solvents, etc.) are widely applied and may be improperly stored and disposed. In addition, deliberate dumping of these chemicals into storm drains and inlets causes environmental harm to waterways.

Pesticides
Pesticides (including herbicides, fungicides, rodenticides, and insecticides) have been repeatedly detected in stormwater at toxic levels, even when pesticides have been applied in accordance with label instructions. As pesticide use has increased, so too have concerns about adverse effects of pesticides on the environment and human health. Accumulation of these compounds in simple aquatic organisms, such as plankton, provides an avenue for biomagnification through the food web, potentially resulting in elevated levels of toxins in organisms that feed on them, such as fish and birds.

Gross Pollutants
Gross Pollutants (trash, debris, and floatables) are often carried by storm water and may include heavy metals, pesticides, and bacteria in stormwater. Typically resulting from an urban environment, industrial sites and construction sites, trash and floatables may create an aesthetic "eye sore" in waterways. Gross pollutants also include plant debris (such as leaves and lawn-clippings from landscape maintenance), animal excrement, street litter, and other organic matter. Such substances may harbor bacteria, viruses, vectors, and depress the dissolved oxygen levels in streams, lakes, and estuaries sometimes causing fish kills.

Specific Storm Water Quality and Pollutants of Concern

The following information is adapted from the "First Flush Report in the Cities of Capitola, Monterey, Pacific Grove, and Santa Cruz", November 7, 2002, prepared by the Monterey Bay Sanctuary Citizen Watershed Monitoring Network. This information pertains to portions of the geographic area covered by the MRSWMP, specifically Monterey and Pacific Grove. Because much of our land use is similar across the permit area, this data was used to give a general idea of the major pollutants of concern throughout the area.

First Flush occurs when sheeting rain flushes roadways and impermeable surfaces and carries months of accumulated contaminants and debris into the ocean. More than an inch of rain pelted the Central Coast with water and winds that brought down trees. Capitola and Santa Cruz

volunteers mobilized at 2:30 AM while Monterey and Pacific Grove volunteers eagerly waited until 5:30 PM for the storm to arrive on the south end of the bay.

The Monterey Bay Sanctuary Citizen Watershed Monitoring Network and the Coastal Watershed Council in collaboration with the Cities of Capitola, Monterey, Pacific Grove, and Santa Cruz coordinated First Flush 2002. When the storm arrived, 19 storm drain outfalls were monitored. All sites were monitored two to four times at approximately 30 minute intervals to determine any change in contaminants over time.

All of the sites were monitored for the parameters listed below.

- conductivity
- water temperature
- pH
- nitrate as N
- orthophosphate as P
- total coliform
- toxicity
- zinc
- copper
- lead
- oil and grease
- total suspended solids (TSS)
- total dissolved solids (TDS)
- Escherichia coli (*E. coli)* or fecal coliform

November 2002 was the third annual First Flush monitoring event in Monterey and Pacific Grove and the second annual event in Capitola and Santa Cruz. With three years of data, time series results and the additional toxicity analysis, some trends are beginning to appear. There are distinct trends between sites and between years. For example, copper, lead and zinc concentrations have increased every year at most of the sites. Average nitrate concentrations have been consistently low for all three years.

Toxicity analysis of three different marine organisms indicated that the water from the First Flush was toxic to the test organisms at the majority of sites. Preliminary findings identify copper and zinc concentrations as possibly contributing to the toxicity.

The data that was collected indicates that there are sites that stand out from the rest with higher pollutant concentrations. Each city had at least one site that warrants more investigation and upstream monitoring. The Network Coordinator will work closely with the Coastal Watershed Council and participating cities to evaluate what future monitoring can be done to track sources and reduce the amount of pollutants entering the Bay.

It is important to identify pollutants in stormwater that flows into the Monterey Bay National Marine Sanctuary. In addition, a dry weather monitoring program, called Urban Watch, has been conducted by citizen volunteers for the past five years in Monterey and four years in Pacific Grove. Volunteers monitor storm drain outfalls twice a month during the dry weather season, typically between June and November. The pollution detection kit that is used for Urban Watch was developed by a National Pollutant Discharge Elimination System (NPDES) Phase 1 City using indicators to identify pollutants typically found from illegal storm drain connections and discharges. Because of this program, it is generally known which outfalls discharge urban runoff that contain indicators of certain contaminants, and education efforts are underway to reduce those pollutants.

This First Flush event is the finale to the Urban Watch season. The same outfalls are monitored for both programs. First Flush marks the change from the dry weather Urban Watch season to the beginning of the rainy season. The data collected is vital information, because the heavy rains flush contaminants that have collected on impermeable surfaces during the long dry season. The pollutants are washed into storm drains and subsequently out into the Bay. The samples collected during the First Flush represent the worst case scenario of the amount of pollutants flowing into the Sanctuary when it rains.

It is important to state that the General Municipal Storm Water Permit does not set numeric effluent limits. The Permit states "…the inclusion of BMPs (Best Management Practices) in lieu of numeric effluent limitations is appropriate in storm water permits."[1] The information presented here is not numeric, but the narrative represents information that has been collected in order to get a sense of the pollutants that we should be most concerned about, in an effort to use available money in the most effective manner. The numeric data will be included in future Annual Reports for comparison purposes and to assist with future refinement of our Storm Water Management Plan and BMPs.

Field Observations. While on site, volunteers documented observations of odors, bubbles, scum, trash, sewage odor, and oil sheen. Bubbles were observed at 13 of the 19 stations indicating the possible presence of detergents. Seven sites observed trash, and no site recorded a sewage odor or oil sheen.

Nutrients. Nitrogen and phosphorous species are typically the most common nutrients found in storm water. Possible sources of nitrate include runoff from fertilized lawns, agricultural and pasture lands, construction sites and septic leachate. Nutrients have not been found to be a major problem at any of the regular monitoring sites.

Orthophosphate is a form of phosphorus commonly found bound to soil particles, in sewage, fertilizers, and in detergents that contain phosphates. Orthophosphate is rapidly taken up by algae and other larger marine plants. With excessive amounts present, large algal blooms can occur. Orthophosphate has been found at all regular monitoring sites and is a pollutant that will be targeted through our Public Education Program.

Bacteria. Total coliform, fecal coliform and *Escherichia coli* (*E. coli)* are types of bacteria. They are of concern because they are indicators of the presence of pathogens that can have adverse human health effects. *E. coli* is a member of the fecal coliform group, which is a part of the total coliform group. The presence of these types of bacteria indicate there could be pathogens present. Bacteria have been present at high levels in the majority of samples tested. The difficulty with this pollutant is that there is some "background" level of bacteria that will always be present in the natural environment. The storm drain systems including natural creeks in our area are often homes to wildlife such as deer, raccoons and birds that contribute to this problem. The "unnatural" sources of this pollutant will be addressed through several illicit

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Note: "Permittees must implement Best Management Practices (BMPs) that reduce pollutants in storm water runoff to the technology-based standard of Maximum Extent Practicable (MEP) to protect water quality. In accordance with 40 CFR section 122.44(k)(2), the inclusion of BMPs in lieu of numeric effluent limitations is appropriate in storm water permits." General Municipal Storm Water Permit, "Effluent Limitations", pg. 6.

discharge program BMPs targeted at issues related to sanitary sewer, septic system, and illegal dumping.

Metals. Storm water runoff in coastal urban areas has been known to produce significant toxicity to early life stages of aquatic organisms due to the presence of trace metals. The effects of high concentrations of metals can include reduced reproduction, developmental deformities, and mortality. In this monitoring event, samples were analyzed for zinc (Zn), copper (Cu), and lead (Pb). Metals are a concern at all regularly tested sites, although values are often erratic. The Municipal Good Housekeeping BMP for Street Sweeping targets metals concentrations.

Oil and Grease. Although oil and grease was present in some samples, they were at very low levels across the board. In the visual observations no oil sheen was reported at any of the test sites.

Total Suspended Solids(TSS). Total suspended solids (TSS) are important to measure, because the suspended solids can carry other pollutants. The suspended solids provide a media or polar charge to attract contaminants. High amounts of sediment are harmful to fish populations, because they destroy habitat, can suffocate eggs, and/or limit the food supply. Sediment may also clog gills or impair an organism's vision when feeding. No pattern was found in TSS results, and only one high result at one site has been observed in three years of testing.

Total Dissolved Solids (TDS). Total dissolved solids are a measurement of the amount of dissolved solids in a sample of water. These solids are usually ions of salts such as sodium, chloride, calcium, carbonate, potassium, or magnesium. These ions are conductors of electricity, and therefore the results can be compared to conductivity measurements taken with a pocket meter. Only one sample has shown high TDS at one site in three years of testing.

Toxicity. The Basin Plan General Objectives, Toxicity section states that "All waters shall be maintained free of toxic substances in concentrations which are toxic to, or which produce detrimental physiological responses in, human, plant, animal, or aquatic life." Toxicity tests were conducted on three different types of marine organisms, with varied results. It is believed that this toxicity is directly related to high metals concentrations. Further work is anticipated to confirm this assumption during future monitoring events at these sites.

Conclusions. After three years of analyzing data and observing the thirteen sites used in this event, there are several pollutants of concern that we believe justify being targeted more heavily than other constituents, with appropriate BMPs. Bacteria and metals remain our pollutants of greatest concern, with orthophosphates also topping the list. The results of the laboratory analysis indicated that concentrations of most of the parameters were higher this year than in previous years. More rain this year than other years is possibly responsible for higher metals, oil and grease, TSS, and bacteria, and lower nitrate concentrations because of dilution. Although the data presented here is in narrative form, existing numerical data will be used as a baseline for comparison in future Annual Reports and to help focus our efforts. Modifications to the Storm Water Management Plan and to our BMP list may be deemed appropriate based on that data.

BMPs which address bacteria include those pertaining to illicit discharge and illegal connection detection and elimination, as listed under Minimum Control Measure No. 3 on pages 7 through

14 of Table 4-1, and those pertaining to catch basin cleaning, as listed under Minimum Measure No. 6 on pages 24 through 33 of Table 4-1. BMPs which address metals include those pertaining to parking lot and street sweeping, as listed under Minimum Measure No. 6 on pages 24 through 33 of Table 4-1. BMPs which address orthophosphate include those pertaining to restaurant employee education, inspection of restaurants, and illicit discharge and illegal connection detection and elimination, as listed under Minimum Control Measures No. 1, 2, and 3 on pages 1 through 14 of Table 4-1.

This monitoring event and report, along with more community outreach, should help to educate the general population that their actions do contribute to the quality of the water flowing off the streets. Followup is planned through the permit cycle to attempt to identify major sources of pollutants that have been found at high levels.

BMPs and Measurable Goals

Using the process described under "Selection of BMPs and Measurable Goals," the group of participating entities identified the BMPs and Measurable Goals they felt would be most useful and effective in reducing the discharge of pollutants from storm sewer systems within the particular geographic area covered by the MRSWMP. Those that were selected constitute the BMPs and Measurable Goals for the MRSWMP. This list is contained in Table 4-1, located at the end of this Section.

The paragraphs below explain why the group selected these BMPs and Measurable Goals for the MRSWMP.

It should be noted that nearly all of the Permittees covered by the MRSWMP are public agencies. As such they are subject to single fiscal year budgets which do not allow them to make future year financial or resource commitments for programs such as the MRSWMP. For this reason the Permittees intend to update and revise their BMPs and Measurable Goals as necessary from year to year to reflect their financial and resource capabilities. These revisions will also take into account their findings as to how effective the BMPs appear to be in reducing storm water pollution.

Minimum Control Measure 1: Public Education and Outreach

EPA has concluded that an informed and knowledgeable community is crucial to the success of a storm water management program. In the Fall of 2001 the City of Monterey did a survey through its quarterly City newsletter *City Focus*. Results from that survey show that approximately 55% of respondents (800 responses out of 15,000 mailed) know about storm water laws, approximately 80% know about proper disposal of household hazardous waste, car oil and the difference between a sanitary sewer and the storm drain. Though these percentages of knowledge about the program are quite high, the response received from this survey was only 5.3% overall, and may represent a more environmentally educated segment of the population. Based on EPA's conclusions and the limited local survey response data that is available, the Permittees believe that the BMP Intent described below will help accomplish the objectives of the MRSWMP.

BMP Intent: ***Provide public education to increase awareness of what constitutes poor stewardship of storm water as a resource. The education and outreach plan will focus on topics such as reducing pollution from lawn and gardening activities, improper disposal of household hazardous wastes, illegal disposal activities, pet wastes, improper handling and disposal of trash, restaurant activities, and automotive activities. Increased education will ultimately result in decreased pollution.***

BMPs

1-1 a and 1-1 b: EPA's guidance documents state that the public education program should inform individuals and households about the steps they can take to reduce storm water pollution, such as ensuring proper septic system maintenance, ensuring the proper use and disposal of landscape and garden chemicals including fertilizers and pesticides, protecting and restoring riparian vegetation, and properly disposing of used motor oil and household hazardous wastes. EPA recommends that the program inform individuals and groups how to become involved in local stream and beach restoration activities, as well as activities that are coordinated by youth service and conservation corps or other citizen groups. EPA recommends that the public education program be tailored, using a mix of locally appropriate strategies, to target specific audiences and communities. Examples of strategies include distributing brochures or fact sheets, sponsoring speaking engagements before community groups, providing public service announcements, implementing educational programs targeted at school age children, and conducting community-based projects such as storm drain stenciling and watershed and beach cleanups. In addition, EPA recommends that some of the materials or outreach programs be directed toward targeted groups of commercial, industrial, and institutional entities likely to have significant storm water impacts. For example, providing information to restaurants on the impact of grease clogging storm drains, and to garages on the impact of oil discharges.

The following paragraphs describe the specific pollutants of concern that will be addressed through these BMPs:

Metals and Pesticides

Many of the existing public education materials described below have been developed to address specific problems found through the Urban Watch volunteer monitoring program (for more information see Public Involvement write-up). Other sources of information that were researched, include the State 303(d) list. Two TMDL's are currently scheduled in the region, including "pesticides- Monterey Bay South" and "metals- Monterey Harbor." Data is currently being collected by the Central Coast Regional Water Quality Control Board for the metals TMDL, and initially it looks like there is a point source cause for this listing. If further data suggests a different conclusion, a specific metals education piece will be considered in the future.

Research throughout the state of California relates specific pesticides to listings of waterbodies for chlorpyrifos and diazinon. These listings have led to a campaign at the national level to phase out these and other pesticides that, when used legally according to package directions, are still toxic to flora and fauna in the waterbodies. The California Association of Stormwater Quality Agencies (CASQA- formerly the California Storm Water Quality Task Force) has taken a lead role in championing this at the national level. The City of Monterey is a member agency of CASQA, the Phase II Work Group leader for CASQA, and updates from that group are brought back to the Permittees in order to aid in decision making.

Household Hazardous Waste

All of the member agencies support existing household hazardous waste programs for their citizens. The Monterey Regional Waste Management District, which covers all of the member agencies, runs a full-time household hazardous waste drop-off center free of charge to residents of the district. Information about this service is inserted in trash bills, on the website, and through 1-800-Cleanup (www.earths911.org).

Trash

Each year Coastal Cleanup Day occurs on the third Saturday in September. Trash collected at this event last year totaled over 860,000 pounds in California, which tops the list for pounds of trash collected. Of that, over 30% by weight was cigarette butts. With the adoption of smoking bans for bars and restaurants in January 1998, smokers moved outdoors. In many places, this means that smokers stand outside the front door and place spent cigarette butts on the sidewalk or in street gutters. This is a major pollutant of concern for our area, where restaurants and tourist-serving businesses are one of the main industries. The City of Carmel currently hosts a monthly beach cleanup.

Restaurant Industry

The restaurant industry is one of the main industries in several cities in the region. Over the past six years, data has shown that in two local communities, the most often occurring pollutant of concern is detergents. Tracing the soap suds up the system led to the discovery that many local restaurants were washing their mats outside where the suds, grease, and food particles could make their way to the gutter and from there to the storm drain. Since that time a survey of over 100 local restaurants in Monterey and Pacific Grove led to the request from restaurant owners and managers to develop an educational program for their employees. A restaurant training video was produced by the City of Monterey. That training video is currently used in the City of Watsonville and Santa Barbara County.

Automotive Industry

The local automotive industry has been a concern in many local jurisdictions over the years. Personal accounts from leaders in the Independent Garage Owners group as well as complaint calls from citizens have alerted local jurisdictions to the need for an education and enforcement program for this industry. The automotive industry by its very nature is one that deals with hazardous materials, toxic chemicals, and hazardous wastes. If disposal is not accomplished legally, this industry has the potential for contributing extremely hazardous pollutants to our environment.

These BMPs were selected because implementation of a public education program is specifically required by the General Permit, because EPA's research has led them to conclude that an informed and knowledgeable community is crucial to the success of a storm water management program, and because each of the Permittees believe that such a program will be an essential and effective means of achieving the BMP Intent.

Measurable Goals

For BMP 1-1.a: This Measurable Goal was selected because development of the Public Education and Outreach Program is specifically required by Section D.2.a of the General Permit. The achievement of this Goal can be measured by determining whether or not it was completed by the specified date. The Program has already been developed and is described in Appendix E. It is expected that in its first year of implementation the Program will consist of:

- Hiring a Public Education Coordinator
- Logo Development
- Airtime/ Free Promotions for Existing Bilingual Radio Ads
- Four spots - Storm Drain, First Flush, Used Motor Oil, Cigarette Butts
- Printed Materials for distribution at schools, events, etc.
- Movie Ads (November – February)
- Dirty Words PSA TV ads to accompany radio ads
- Print Ads or Bus Ads

For BMP 1-1.b: As explained in the SWRCB's Fact Sheet for the General Permit, each annual report provides the opportunity to update both BMPs and Measurable Goals. This Measurable Goal was selected so that the Public Education and Outreach Program can be revised each year based on public input and experience gained from conducting the program.

Minimum Control Measure 2: Public Participation/Involvement

Based on the findings of EPA about the general nature of pollutants contained in storm water, and the specific findings of the First Flush report, it is clear that public participation and involvement will be necessary to effectively carry out the objectives of the MRSWMP. The Permittees believe having the public participate and be involved in the MRSWMP through the proposed BMPs for this Minimum Measure will help achieve the BMP Intents described below.

BMP Intent: ***Increase public awareness of what constitutes poor stewardship of storm water as a resource and increase public actions such as reporting of problems to authorities. This ultimately will result in decreased pollution.***

BMPs

2-1.a, 2-1.b, 2-1.c, and 2-1.d: EPA's guidance documents recommend that the public be included in the development and implementation of storm water management programs. These BMPs were selected because they carry out this recommendation, because they will provide the opportunity for the public to be involved in identifying and managing storm water problems, and because the Permittees believe they will help achieve the BMP Intent.

2-2.a, 2-2.b, 2-2.c, and 2-2.d: EPA's guidance documents recommend that the public be provided the opportunity to participate in activities that will help reduce storm water pollution. These BMPs were selected because they carry out this recommendation, because they will promote a general public understanding and awareness of storm water problems, and because the Permittees believe they will help achieve the BMP Intent.

Measurable Goals

For BMP 2-1a: EPA's guidance documents recommend that Permittees provide opportunities for members of the public to be involved in program development and implementation through such things as serving as citizen representatives on a local storm water management panel and attending public meetings on storm water activities and programs. This Measurable Goal was selected to meet the public involvement objective by providing the public with the opportunity to learn about the General Permit requirements and the MRSWMP, and to provide their input to help update the BMPs and Measurable Goals as appropriate in each year's annual report.

For BMPs 2-1.b, 2-1.c, and 2-1.d: These Measurable Goals were selected because they will indicate the effectiveness of the public outreach program by measuring the number of members of the public who participate in the Public Involvement Workshops.

For BMPs 2-2.a, 2-2.b, 2-2.c, and 2-2.d: EPA's guidance documents recommend that the public be provided opportunities to work as citizen volunteers to educate other individuals about the storm water program, to assist in program coordination with other pre-existing programs, and/ or to participate in volunteer monitoring efforts. These Measurable Goals were selected because they meet the public participation objective by involving the public in "hands on" activities that have been shown to reduce storm water pollution. The sections below describe the principal

public participation programs that are either already established, or may be established based on public response:

Coastal Cleanup Day (BMPs 2-2.a and 2-2.b): Marine debris in our oceans and watersheds is dangerous to humans and animals, causes economic impacts, and is unsightly. To a sea turtle, a floating plastic bag looks like a jellyfish meal. Fishing line entangles marine mammals and birds, and also damages fishing gear, increasing the cost of marine-based products. Years of Coastal Cleanup Day data have revealed 60% of beach debris originates from inland sources of pollution such as cigarette butts and plastic drink bottles. This debris washes down storm drains directly to our oceans. Coastal Cleanup Day is a statewide program sponsored by the California Coastal Commission. Each year Coastal Cleanup Day occurs on the third Saturday in September. Last year, California had 46,000 volunteers remove 860,000 pounds of trash and recyclables from 2,500 miles of shoreline. In Monterey County alone, over 1,600 volunteers at 24 local sites cleared over 8,000 pounds (over 4 tons!) of trash and recyclable materials. Of that, over 30% by weight was cigarette butts. With the adoption of smoking bans for bars and restaurants in January 1998, smokers moved outdoors. In many places, this means that smokers stand outside the front door and place spent cigarette butts on the sidewalk or in street gutters. This is a major pollutant of concern for the area covered by the MRSWMP, where restaurants and tourist-serving businesses are one of the main industries. Within the area covered by the MRSWMP there are over 10 Coastal Cleanup Day sites that will be active in this event in 2003. According to William J. Douros, MBNMS superintendent, Coastal Cleanup Day is an excellent way for citizens to get involved in protecting their sanctuary, and the event also brings together many groups and organizations that are interested in improving our marine environment.

Storm Drain Stenciling (BMP 2-2.c): Each individual city should coordinate this within their own boundaries. Stenciling kit supplies and costs are normally provided. This is often best done by an Eagle Scout or service group. The City pays for materials and provide them to the group, the City provides maps, the group then coordinates the project. This has successfully been done in the City of Monterey, City of Pacific Grove, and City of Carmel.

Volunteer Monitoring Program (Urban Watch) (BMP 2-2.d): This has been done by the Cities of Monterey and Pacific Grove for several years. Volunteers are trained in May and monitor storm drain outfalls during the dry weather season between June and October/November. Volunteer groups take samples approximately twice each month and analyze the samples for specific indicators with an EPA-approved LaMotte testing kit. This is a good way to ascertain the baseline level of water quality for your city. It helps to pinpoint areas with problems from detergents, solvents, etc. Volunteers also act as educators to the public answering questions about their efforts.

BMP Intent: Collaborate and participate in ongoing volunteer water quality monitoring efforts by becoming an active participant in the Citizen Water Quality Monitoring Network. This will ensure collaboration and participation in the ongoing volunteer water quality monitoring efforts and give permit holders a clearer understanding of the contaminants of concern in their jurisdiction.

BMPs

2-3.a: As discussed earlier in this MRSWMP there are numerous groups and organizations that are working to monitor and improve the quality of storm water discharges. The Citizen Water Quality Monitoring Network provides an excellent forum for communication and coordination between these parties. This BMP was selected in order to ensure that the Public Participation and Involvement activities of the MRSWMP are carried out in close coordination and cooperation with these other parties.

Measurable Goals

For BMP 2-3.a: This Measurable Goal was selected because it will demonstrate the coordination and communication between the activities of the MRSWMP and the activities of the other parties that are working to monitor and improve the quality of storm water discharges.

Minimum Control Measure 3: Illicit Discharge Detection and Elimination

The Water Quality Issues listed under the heading of "MS4 Administration" are in reality administrative actions the Permittees need to take to carry out the MRSWMP. The Water Quality Issues listed under the heading "Residents, Homeowners, and Businesses" have been identified in EPA's guidance documents as being typical for most urbanized areas. Lacking any information to the contrary, the Permittees believe the BMP Intents described below are applicable to the area covered by the MRSWMP, and that the proposed BMPs will help achieve these BMP Intents.

BMP Intent: Promote the reporting of illicit discharges by having a system for receiving such reports.

BMPs

3-1.a through 3-1.d: These BMPs were selected because they are part of an illicit discharge detection program, as required by Sections D.c.1 and D.c.4 of the General Permit, and because they help to comply with the requirement of Section D.c.5 of the General Permit.

Measurable Goals

For BMPs 3-1.a through 3-1.c: These Measurable Goals were selected because they are a simple measure of their associated BMPs.

For BMP 3-1.d: This Measurable Goal was selected because it will be a good indicator of progress being made toward curbing illegal disposal activities.

BMP Intent: Have accurate storm drain maps to help locate illicit discharges and/or dischargers.

BMPs

3-2.a and 3-2.b: These BMPs were selected because they fulfill the requirements of Section D.c.2 of the General Permit.

Measurable Goals:

For BMPs 3-2.a and 3-2.b: These Measurable Goals were selected because they are a simple measure of their associated BMPs.

BMP Intent: Reduce pollution from illicit connections and/or discharges.

BMPs

3-3.a: This BMP was selected because it is part of an illicit discharge detection program, as required by Sections D.c.1 and D.c.4 of the General Permit.

3-4.a through 3-4.g: These BMPs were selected because they are part of an illicit discharge

detection program, as required by Sections D.c.1 and D.c.4 of the General Permit.

Measurable Goals
For BMP 3-3.a: This Measurable Goal was selected because it is a simple measure of its associated BMP.

For BMPs 3-4.a through 3-4.f: These Measurable Goals were selected because they will be good indicators of the progress being made toward detecting the presence of illicit connections or discharges.

For BMP 3-4.g: This Measurable Goal was selected because it will verify that illicit connections are being eliminated.

BMP Intent: Reduce pollution from illegal disposal activities.

BMPs
3-5.a through 3-5.f: EPA's guidance documents define illicit connections as "illegal and/or improper connections to storm drainage systems and receiving waters". Many building owners or operators are not aware that improper connections exist in their facilities. This is illustrated by the experience of one large wastewater agency that, over an 11-year period, investigated 3,851 businesses and industries for illicit connections to its storm sewer system. Of those investigated, about 8 percent had illicit connections, and where one illicit connection was found, there was an average of 2.4 improper connects at that business. Based on this experience and similar experiences elsewhere, EPA has concluded that identifying and removing illicit connections is a measure for reducing storm water pollution, especially in areas where pollutants with unknown sources have been detected in receiving waters. These BMPs were selected because they fulfill the requirements of Section D.c.3 of the General Permit and because, based on the EPA guidance information, it is reasonable to believe that some of storm water pollution that is occurring within the area covered by the MRSWMP may be coming from illicit connections and/or discharges.

Measurable Goals
For BMPs 3-5.a through 3-5.f: These Measurable Goals were selected because they are a simple measure of their associated BMPs.

BMP Intent: Reduce pollution from recreational vehicles and boats.

BMPs
3-6.a through 3-6.c: EPA's guidance documents state that recreational sewage management measures are needed to regulate wastewater generated from outdoor activities such as boating or camping by providing alternative methods to waste disposal in place of illegal overboard discharge. EPA goes on to say that the proper disposal of recreational waste is necessary to avoid the impacts that these activities and their associated developments (i.e., marinas and campgrounds) can have on aquatic environments. Marina and recreational boat sewage can have substantial impact on water quality by introducing bacteria, nutrients, and hazardous chemicals into waterways. It has been reported that a single overboard discharge of human waste can be detected in up to a 1-square-mile area of shallow enclosed water. These human wastes can

include *Streptococci*, fecal coliform, and other bacteria which contribute to incidences of human disease, shellfish bed closures, alerts on eating fish, and algal blooms. Boats can be a significant source of fecal coliform bacteria in areas with high boating densities and low hydrologic flushing, and fecal coliform levels become elevated near boats during periods of high occupancy and usage. Holding tanks on boats also concentrate pollutants and use increased levels of oxygen during decomposition.

These BMPs were selected because of the high levels of tourist activity and high use of campers and watercraft within the area covered by the MRSWMP.

Measurable Goals
For BMPs 3-6.a and 3-6.b: These Measurable Goals were selected because they will be good indicators of progress being made toward reducing pollution from discharges from RVs and boats.

For BMP 3-6.c: This Measurable Goal was selected because it will verify that discharges from RVs and boats are being regulated.

***BMP Intent:* Inform employees, businesses, and the general public of the hazards that are generally associated with illegal discharges and improper disposal of waste.**

BMPs
3-7.a: This BMP was selected to ensure that public education regarding the hazards associated with illegal discharges and improper disposal of waste is included in the Public Education and Public Outreach Program conducted under Minimum Control Measure 1.

Measurable Goals
For BMP 3-7.a: This Measurable Goal was selected because it is a simple measure of its associated BMP.

4. Construction Site Runoff Control

EPA's guidance documents state that polluted storm water runoff from construction sites often flows to MS4s and ultimately is discharged into local rivers and streams. Sediment is usually the main pollutant of concern, although other pollutants may include solid and sanitary wastes, fertilizers, pesticides, oil and grease, concrete truck washout, construction chemicals, and construction debris.

Sediment runoff rates from construction sites are typically 10 to 20 times greater than those of agricultural lands, and 1,000 to 2,000 times greater than those of forestlands. During a short period of time, construction sites can contribute more sediment to streams than can be deposited naturally during several decades. The resulting siltation, and the contribution of other pollutants from construction sites, can cause physical, chemical, and biological harm to the nation's waters. For example, excess sediment can quickly fill rivers and lakes, requiring dredging and destroying aquatic habitats.

Several of the common pollutants associated with construction site runoff have been identified in the First Flush Report previously cited under the heading "Specific Storm Water Quality and Pollutants of Concern" in this Section 4 of the MRSWMP. There is considerable construction activity throughout the area covered by the MRSWMP. Therefore, lacking any information to the contrary, the Permittees believe the BMP Intent described below is applicable to the area covered by the MRSWMP, and that the proposed BMPs will help achieve this BMP Intent.

BMP Intent: ***Reduce pollution from construction sites by developing guidelines and standards for construction site runoff. These will address erosion and sediment controls, and shall contain requirements for construction site operators to: implement appropriate erosion and sediment control BMPs; to control waste that may cause adverse impacts to water quality such as discarded building materials, concrete truck washout, paint and plastering wash down, chemicals, litter, and sanitary waste at the construction site.***

BMPs

4-1.a through 4-1.f: These BMPs were selected because they will fulfill the requirements of Sections D.2.d.1 through D.2.d.3 of the General Permit.

4-2.a through 4-2.c: These BMPs were selected because they will fulfill the requirements of Section D.2.d.4 of the General Permit.

4-3.a through 4-3.d: These BMPs were selected because they will fulfill the requirements of Section D.2.d.6 of the General Permit.

4-4.a through 4-4.c: These BMPs were selected because they will fulfill the requirements of Section D.2.d.5 of the General Permit. In addition EPA's guidance documents state that this will further reinforce the public participation component of the regulated small MS4 storm water program and help to recognize the crucial role that the public can play in identifying instances of noncompliance.

Measurable Goals

For BMPs 4-1.a through 4-1.f: These Measurable Goals were selected because they will ensure that progress is being made in implementing their associated BMPs.

For BMPs 4-2.a through 4-2.c: These Measurable Goals were selected because they will ensure that progress is being made in implementing their associated BMPs.

For BMPs 4-3.a through 4-3.d: These Measurable Goals were selected because they will verify that the ordinance requirements pertaining to construction site runoff control are being enforced.

For BMPs 4-4.a through 4-4.c: These Measurable Goals were selected because they will ensure that progress is being made in implementing their associated BMPs.

5. Post-Construction Runoff Control

EPA has concluded that post-construction storm water management in areas undergoing new development or redevelopment is necessary because runoff from these areas has been shown to significantly effect receiving waterbodies. Many studies indicate that prior planning and design for the minimization of pollutants in post-construction storm water discharges is the most cost-effective approach to storm water quality management.

EPA has found that there are generally two forms of substantial impacts of post-construction runoff. The first is caused by an increase in the type and quantity of pollutants in storm water runoff. As runoff flows over areas altered by development, it picks up harmful sediment and chemicals such as oil and grease, pesticides, heavy metals, and nutrients (e.g., nitrogen and phosphorus). These pollutants often become suspended in runoff and are carried to receiving waters, such as lakes, ponds, and streams. Once deposited, these pollutants can enter the food chain through small aquatic life, eventually entering the tissues of fish and humans. The second kind of post-construction runoff impact occurs by increasing the quantity of water delivered to the waterbody during storms. Increased impervious surfaces interrupt the natural cycle of gradual percolation of water through vegetation and soil. Instead, water is collected from surfaces such as asphalt and concrete and routed to drainage systems where large volumes of runoff quickly flow to the nearest receiving water. The effects of this process include streambank scouring and downstream flooding, which often lead to a loss of aquatic life and damage to property.

Based on the EPA guidance information, and lacking any information to the contrary, it is reasonable to believe that pollution from storm water runoff from new development and redevelopment is contributing to storm water pollution within the area covered by the MRSWMP, and that the BMP Intent described below is also applicable to that area. The Permittees that the proposed BMPs will help achieve this BMP Intent.

BMP Intent: Reduce post-construction pollution by developing post construction guidelines and standards for storm water runoff from new development and redevelopment. These will address such pollutants as sediments, chemicals, oils and grease, metals, and nutrients, as well as erosion and flooding.

BMPs

5-1.a through 5-1.f: These BMPs were selected because they are essentially required by Sections D.2.e.1 through D.2.e.4 of the General Permit. In addition implementation of these BMPs will be consistent with EPA's recommendations that Permittees adopt a planning process that includes implementation strategies (e.g., adopt a combination of structural and/or non-structural measures), operation and maintenance policies and procedures, and enforcement procedures.

5-2.a and 5-2.b: These BMPs were selected to ensure that the ordinance requirements of BMP 5-1.d are applied during design and construction.

5-3.a through 5-3.c and 5-4.a: These BMPs were selected to ensure that the ordinance requirements of BMP 5-1.d are applied after the developments are completed and in use.

Measurable Goals

For BMPs 5-1.a through 5-1.f: These Measurable Goals were selected because they will ensure that progress is being made in implementing their associated BMPs.

For BMPs 5-2.a and 5-2.b: These Measurable Goals were selected because they are simple measures of their associated BMPs.

For BMPs 5-3.a and 5-3.b: These Measurable Goals were selected because they are simple measures of their associated BMPs.

For BMPs 5-3.c and 5-4.a These Measurable Goals were selected because they will verify that the storm water pollution prevention systems that are being constructed are being properly operated and maintained.

6. Pollution Prevention/Good Housekeeping

EPA's guidance documents state that the Pollution Prevention/Good Housekeeping for municipal operations minimum control measure is a key element of the small MS4 storm water management program. This measure requires Permittees to examine and subsequently alter their own actions to help ensure a reduction in the amount and type of pollution that: (1) collects on streets, parking lots, open spaces, and storage and vehicle maintenance areas and is discharged into local waterways; and (2) results from actions such as environmentally damaging land development and flood management practices or poor maintenance of storm sewer systems. This measure is meant primarily to improve or protect receiving water quality by altering municipal or facility operations. Additionally, it may also result in a cost savings for the Permittee, because proper and timely maintenance of storm sewer systems can help avoid repair costs from damage caused by age and neglect.

The audiences to which the BMPs described below will be directed comprise the segments of the Permittees' staffs that are directly involved in work and activities that can have an impact on storm water quality. In selecting the BMP Intents to be addressed under this Minimum Measure, the Permittees assessed their municipal activities to determine which activities were most likely to have an impact on storm water quality. Based on that assessment, the BMP Intents described below pertain to what the Permittees believe are the principal types of pollution to which their municipal activities may be contributing.

BMP Intent: Minimize pollution from improper discharge or disposal of materials.

BMPs

6-1 a and 6-1 b: These BMPs were selected because they will fulfill the requirements of Section D.2.f.1 of the General Permit.

6-2 a through 6-2 c: EPA's guidance documents state that failure to properly store hazardous materials dramatically increases the probability that they will end up in local waterways. Most municipalities have some types of hazardous chemicals stored in their facilities. Practices such as covering hazardous materials or even storing them properly can have dramatic impacts. Hazardous material storage is relevant to both urban and rural settings and all geographic regions. The effects of hazardous material leakage may be more pronounced in areas with heavier rainfall, due to the greater volume of runoff. These BMPs were selected based on EPA's recommendations, and the fact that most of the Permittees store some types of hazardous materials in locations where leakage or spillage could flow to Monterey Bay or another nearby waterway.

Measurable Goals

For BMPs 6-1 a and 6-1 b: These Measurable Goals were selected because they are simple measures of their associated BMPs.

For BMPs 6-2 a through 6-2 c: These Measurable Goals were selected because they are good indicators of the implementation of their associated BMPs.

BMP Intent: ***Minimize pollution from used motor oil being disposed of improperly.***

BMPs

6-3.a through 6-3.c: EPA's guidance documents state that used motor oil is one type of hazardous waste because it contains heavy metals picked up from the engine during use. Motor oil is toxic to humans, wildlife, and plants, it should be disposed of at a local recycling or disposal facility. EPA reports that estimates show that each year over 180 million gallons of used oil is disposed of improperly and that a single quart of motor oil can pollute 250,000 gallons of drinking water. These BMPs were selected based on EPA's recommendations, and the fact that most of the Permittees generate and/or store used motor oil in locations where leakage or spillage could flow to Monterey Bay or another nearby waterway, and to ensure that proper procedures for storage and disposal of used motor oil are being employed.

Measurable Goals

For BMPs 6-3.a through 6-3.c: These Measurable Goals were selected because they are good indicators of the implementation of their associated BMPs.

BMP Intent: ***Minimize pollution from landscaping & lawn care management and pest control management activities.***

BMPs

6-4.a through 6-4.e: EPA recommends these BMPs to control the storm water impacts of landscaping and lawn care practices through education and outreach on methods that reduce nutrient loadings and the amount of storm water runoff generated from lawns. Research has indicated that nutrient runoff from lawns has the potential to cause eutrophication in streams, lakes, and estuaries. Nutrient loads generated by municipal properties can be significant, and recent research has shown that lawns produce more surface runoff than previously thought. Pesticide runoff can contribute pollutants that contaminate drinking water supplies and are toxic to both humans and aquatic organisms. In terms of fertilizer inputs, nutrients are applied to lawns at about the same application rates as those used for row crops. The urban lawn is also estimated to receive an annual input of 5 to 7 pounds of pesticides per acre. Based on recent surveys, most people do not realize that lawn fertilizer can cause water quality problems, and many urban landowners are unaware of the actual nutrient needs of their lawns. EPA has concluded that informing municipal parks staffs on methods to reduce fertilizer and pesticide application, limit water use, and avoid land disturbance can help alleviate the potential impacts of a major contributor of nonpoint source pollution in their communities.

These BMPs were selected because the First Flush Report showed that there are high nutrient levels in many of the storm water outfalls, because all of the Permittees have landscaping that their staffs maintain, and because some of them have extensive lawn and/or park areas very close to Monterey Bay or other waterbodies. Also, these BMPs fulfill the requirements of Section D.2.f.2 of the General Permit.

Measurable Goals

For BMPs 6-4.a through 6-4.e: These Measurable Goals were selected because they are good indicators of the implementation of their associated BMPs.

BMP Intent: ***Minimize pollution for improper discharge of chlorinated and/or brominated water from swimming pools & spas.***

BMPs

6-5 a: EPA's guidance documents state that chlorinated water discharged to surface waters has an adverse impact on local water quality. Swimming pools are a source of chlorinated water discharged into sanitary and storm sewer systems. An average swimming pool holds 19,000 gallons of chlorinated water. Pools have high concentrations of chlorine, which is toxic to wildlife and fish. Pool water should not be discharged to the storm sewer system or directly into a waterbody. Instead alternative discharge options should be used. This BMP was selected based on EPA's recommendations, and because some Permittees have municipal pools. If those pools were drained to the storm water system, the chlorinated water would flow to Monterey Bay or another nearby waterway.

Measurable Goals

For BMP 6-5 a: This Measurable Goal was selected because it is good indicator of the implementation of its associated BMP.

BMP Intent: ***Minimize pollution from street and parking lot cleaning.***

BMPs

6-6 a: EPA's guidance documents recommend that street sweeping be performed on a regular basis to minimize pollutant export to receiving waters. These cleaning practices are designed to remove from road and parking lot surfaces sediment debris and other pollutants that are a potential source of pollution impacting urban waterways. Although performance monitoring done in the early 1980s for the Nationwide Urban Runoff Program indicated that street sweeping was not very effective in reducing pollutant loads, recent improvements in street sweeper technology have enhanced the ability of present day machines to pick up the fine grained sediment particles that carry a substantial portion of the storm water pollutant load. Street sweeping is practiced in most urban areas, often as an aesthetic practice to remove sediment buildup and large debris from curb gutters. The frequency and intensity of rainfall for a region are key variables in determining how streets need to be swept to obtain a desired removal efficiency. This BMP was selected based on EPA's findings regarding the significance of the storm water quality impacts of pollutants discharged with street and parking lot runoff, and because all of the Permittees have streets and parking lots that they maintain.

Measurable Goals

For BMP 6-6 a: This Measurable Goal was selected because it is a good indicator of the implementation of its associated BMP.

BMP Intent: ***Minimize pollution from automotive maintenance activities.***

BMPs

6-7 a through 6-7 g: EPA recommends that these pollution prevention measures be employed to create a program of targeted outreach and training for municipal fleets (public works, school

buses, fire, police, and parks) involved in automobile maintenance about practices that control pollutants and reduce storm water impacts. EPA considers automotive maintenance facilities to be storm water "hot spots" where significant loads of hydrocarbons, trace metals, and other pollutants can be produced that can affect the quality of storm water runoff. Some of the waste types generated at automobile maintenance facilities include the following:

- Solvents (paints and paint thinners)
- Antifreeze
- Brake fluid and brake lining
- Batteries
- Motor oils
- Fuels (gasoline, diesel, kerosene)
- Lubricating grease.

Because of their high potential to contribute to storm water pollution, automotive maintenance facilities' discharges to storm and sanitary sewer systems need to be highly regulated. Fluid spills and improper disposal of materials result in pollutants, heavy metals, and toxic materials entering ground and surface water supplies, creating public health and environmental risks. Alteration of practices involving the cleanup and storage of automotive fluids and cleaning of vehicle parts can help reduce the influence of automotive maintenance practices on storm water runoff and local water supplies. These BMPs were selected based on EPA's findings regarding the pollution potential of automotive facilities, and the fact that most of the Permittees have such facilities.

Measurable Goals

For BMPs 6-7 a through 6-7 g: These Measurable Goals were selected because they are good indicators of the implementation of their associated BMPs.

BMP Intent: ***Minimize pollution from municipal vehicle washing activities.***

BMPs

6-8 a through 6-8 f: Outdoor vehicle washing has the potential to result in a high load of nutrients, metals, and hydrocarbons during dry weather conditions in many watersheds, as the detergent-rich water used to wash the grime off the vehicles flows down the street and into the storm drain. EPA's guidance documents recommend educating municipal fleets (public works, school buses, fire, police, and parks) on the water quality impacts of the outdoor washing of vehicles and how to avoid allowing polluted runoff to enter the storm drain system. These BMPs were selected based on EPA's recommendations, and because most of the Permittees have washing facilities for their municipal vehicles.

Measurable Goals

For BMPs 6-8 a through 6-8 f: These Measurable Goals were selected because they are good indicators of the implementation of their associated BMPs.

BMP Intent: ***Minimize pollution from roadway and bridge maintenance.***

BMPs

6-9 a through 6-9 f: Roadway systems are a large part of the infrastructure of urban areas, and

require regular repairs and maintenance due to traffic use and climatic conditions. EPA's guidance documents state that substantial amounts of sediment and pollutants are generated during roadway and bridge repair operations, and these pollutant loadings can threaten local water quality by contributing heavy metals, hydrocarbons, sediment, and debris to storm water runoff. Numerous pathways for pollutant deposition on roadways and bridges influence the water quality of storm water runoff. These BMPs were selected based on EPA's findings, and because all of the Permittees have roadway systems which they repair and maintain on a routine basis.

Measurable Goals
For BMPs 6-9.a through 6-9.f: These Measurable Goals were selected because they are good indicators of the implementation of their associated BMPs.

BMP Intent: Minimize pollution from contaminants accumulated in storm sewer systems.

BMPs
6-10.a through 6-10.e: EPA's guidance documents recommend that storm drain systems be cleaned regularly. Routine cleaning reduces the amount of pollutants, trash, and debris both in the storm drain system and in receiving waters. Clogged drains and storm drain inlets can cause the drains to overflow, leading to increased erosion. Benefits of cleaning include increased dissolved oxygen, reduced levels of bacteria, and support of instream habitat. Areas with relatively flat grades or low flows should be given special attention because they rarely achieve high enough flows to flush themselves. This BMP was selected based on EPA's recommendations, and because all of the Permittees have storm drain systems that they operate and maintain.

Measurable Goals
For BMPs 6-10.a through 6-10.e: These Measurable Goals were selected because they are good indicators of the implementation of their associated BMPs.

TABLE 4-1 MCM1: PUBLIC EDUCATION & OUTREACH:
Permit holders must implement a public education program to distribute educational materials to the community and/or conduct outreach activities about the impacts of storm water discharges on water bodies and the steps that the public can take to reduce pollutants in storm water runoff.

BMP Intent	Best Management Practice / Activity	BMP#	Implementation Plan	Permit Yr 1	Permit Yr 2	Permit Yr 3	Permit Yr 4	Permit Yr 5	Measurable Goals.	Implementers
Provide public education to increase awareness of what constitutes poor stewardship of storm water as a resource. The education and outreach plan will focus on topics such as reducing pollution from lawn and gardening activities, improper disposal of household hazardous wastes, illegal disposal activities, pet wastes, improper handling and disposal of trash, restaurant activities, and automotive activities. Increased education will ultimately result in decreased pollution.	Educate the audience about the causes of storm water pollution and the things they can do to reduce this pollution. (See Appendix E for Public Education and Outreach Program)	1-1.a	Develop & Implement a comprehensive Education & Outreach Plan for the entire region targeting all ages, classes, and ethnic groups	X					Date plan completed and implemented	MRSWMP Group in partnership with MBNMS
		1-1.b	Review & revise "Year 1 Public Education & Outreach Plan" to maximize efficiency in audience reached, and address current contaminants impacting water quality. Changes will be based on input from the public, volunteer monitoring network data, budgetary constraints, and contaminants of concern or audiences not covered as in depth in prior years.		X	X	X	X	Date plan revisions are put into place	MRSWMP Group in partnership with MBNMS

TABLE 4-1 MCM2: PUBLIC PARTICIPATION & INVOLVEMENT: The public should be included in developing, implementing, and reviewing the permit holder's storm water management program. The permit holders should make efforts to reach out and engage all economic and ethnic groups within their permit boundaries.										
BMP Intent	**Best Management Practice / Activity**	**BMP#**	**Implementation Plan**	**Permit Yr 1**	**Permit Yr 2**	**Permit Yr 3**	**Permit Yr 4**	**Permit Yr 5**	**Measurable Goals.**	**Implementers**
Increase public awareness of what constitutes poor stewardship of storm water as a resource and increase public actions such as reporting of problems to authorities. This ultimately will result in decreased pollution.	Encourage general public and stakeholder involvement in identifying and solving storm water management problems by holding two publicly advertised "Public Involvement Workshops" per a year. Public advertisement will be via local newspapers, city websites, community calendars, and/or MRSWMP email list serve.(See Appendix F for Public Education and Outreach Program)	2-1.a	Draft annual report will be posted on website and in city offices 1 week prior to Workshop No. 1 for review by public.	X	X	X	X	X	All written public comments submitted and notes taken at workshop will be considered for inclusion in the annual report and kept on file.	MRSWMP Group & MS4 Administration

BMP Intent	Best Management Practice / Activity	BMP#	Implementation Plan	Permit Yr 1	Permit Yr 2	Permit Yr 3	Permit Yr 4	Permit Yr 5	Measurable Goals.	Implementers
Increase public awareness of what constitutes poor stewardship of storm water as a resource and increase public actions such as reporting of problems to authorities. This ultimately will result in decreased pollution.	Encourage general public and stakeholder involvement in identifying and solving storm water management problems by holding two publicly advertised "Public Involvement Workshops" per a year. Public advertisement will be via local newspapers, city websites, community calendars, and/or MRSWMP email list serve.(See Appendix F for Public Education and Outreach Program)	2-1.b	Workshop #1 to be held annually in July/August prior to Annual Report submission to explain the Phase II Permit objectives and solicit public input on the success of the current BMPs and Measurable Goals. (Note: In year one no draft annual report will have been prepared for review at Workshop #1, as year one will have just begun Consequently this Workshop in year one will focus on general overview of Phase II requirements, and BMPs selected to increase overall awareness and knowledge of Phase II program by the general public. .)	X	X	X	X	X	40 participants per workshop	MRSWMP Group

BMP Intent	Best Management Practice / Activity	BMP#	Implementation Plan	Permit Yr 1	Permit Yr 2	Permit Yr 3	Permit Yr 4	Permit Yr 5	Measurable Goals.	Implementers
Increase public awareness of what constitutes poor stewardship of storm water as a resource and increase public actions such as reporting of problems to authorities. This ultimately will result in decreased pollution.	Encourage general public and stakeholder involvement in identifying and solving storm water management problems by holding two publicly advertised "Public Involvement Workshops" per a year. Public advertisement will be via local newspapers, city websites, community calendars, and/or MRSWMP email list serve. (See Appendix F for Public Education and Outreach Program)	2-1.c	Workshop #2 to be held in March/April annually: (Note: Workshop in year one will either focus on general overview of Phase II requirements, and BMPs selected to increase overall awareness and knowledge of Phase II program by the general public, or will focus on a specific target audience and associated contaminants of concern. The decision on the focus for this year one Workshop will be based on knowledge and experience gained by the Permittees from carrying out the MRSWMP up to the time this Workshop is scheduled.)	X					40 participants per workshop	MRSWMP Group

BMP Intent	Best Management Practice / Activity	BMP#	Implementation Plan	Permit Yr 1	Permit Yr 2	Permit Yr 3	Permit Yr 4	Permit Yr 5	Measurable Goals.	Implementers
Increase public awareness of what constitutes poor stewardship of storm water as a resource and increase public actions such as reporting of problems to authorities. This ultimately will result in decreased pollution.	Encourage general public and stakeholder involvement in identifying and solving storm water management problems by holding two publicly advertised "Public Involvement Workshops" per a year. Public advertisement will be via local newspapers, city websites, community calendars, and/or MRSWMP email list serve. (See Appendix F for Public Education and Outreach Program)	2-1.d	Workshop #2 to be held in Mar-April annually: Workshop in years 2-5 will focus on a specific target audience and associated contaminants of concern. Topic/audience will be chosen each year based on historical contaminants of concern for industries common to permit jurisdiction area, volunteer monitoring network data, and topic/audience not chosen the prior year. Priority will be given to Attachment 4 listed industries.		X	X	X	X	40 participants per workshop	MRSWMP Group

BMP Intent	Best Management Practice / Activity	BMP#	Implementation Plan	Permit Yr 1	Permit Yr 2	Permit Yr 3	Permit Yr 4	Permit Yr 5	Measurable Goals.	Implementers
Increase public awareness of what constitutes poor stewardship of storm water as a resource and increase public actions such as reporting of problems to authorities. This ultimately will result in decreased pollution.	Encourage general public participation in programs and activities designed to promote understanding and awareness of storm water pollution, such as cleanup events and restoration activities. (See Appendix F for Public Education and Outreach Program)	2-2.a	Provide financial sponsorship support for Annual Coastal Cleanup Day in Monterey County or other local beach clean up efforts.	X	X	X	X	X	Annual financial sponsorship of jurisdiction wide event	MRSWMP Group
		2-2.b	Recruit volunteers through municipal employee base for Annual Coastal Clean Up Day or other local clean up efforts.	X	X	X	X	X	Each permit holder to recruit volunteers through two separate agency channels; e.g. email, paycheck stuffers, internal newsletters, etc.	MS4 Administration
		2-2.c	Provide support for, or assistance with storm drain stenciling through providing supplies, volunteer recruitment & dedicating MRSWMP allocated hours by MBNMS staff	X	X	X	X	X	520 allocated MBNMS staff hours by MRSWMP Group. Financial support for supplies to be provided by each permit holder as needed within their jurisdiction.	MRSWMP Group in partnership with MBNMS

BMP Intent	Best Management Practice / Activity	BMP#	Implementation Plan	Permit Yr 1	Permit Yr 2	Permit Yr 3	Permit Yr 4	Permit Yr 5	Measurable Goals.	Implementers
Increase public awareness of what constitutes poor stewardship of storm water as a resource and increase public actions such as reporting of problems to authorities. This ultimately will result in decreased pollution.	Encourage general public participation in programs and activities designed to promote understanding and awareness of storm water pollution, such as cleanup events and restoration activities. (See Appendix F for Public Education and Outreach Program)	2-2.d	Provide financial support for, and assistance with volunteer monitoring programs such as: Urban Watch, First Flush, or other storm water quality protective programs	X	X	X	X	X	$500 annual contribution by group and each permit holder to recruit volunteers through two separate agency channels; e.g. email, paycheck stuffers, internal newsletters, etc.	MRSWMP Group & MS4 Administration

BMP Intent	Best Management Practice / Activity	BMP#	Implementation Plan	Permit Yr 1	Permit Yr 2	Permit Yr 3	Permit Yr 4	Permit Yr 5	Measurable Goals.	Implementers
Collaborate and participate in ongoing volunteer water quality monitoring efforts by becoming an active participant in the Citizen Water Quality Monitoring Network. This will ensure collaboration and participation in the ongoing volunteer water quality monitoring efforts and give permit holders a clearer understanding of the contaminants of concern in their jurisdiction.	Become an active participant in the Citizen Water Quality Monitoring Network (See Appendix F for Public Education and Outreach Program)	2-3.a	A representative from the MRSWMP group will attend each monitoring network meeting and report back to permit holder group. Permit holders will also recruit volunteers through employee and citizen group channels, websites, and / or newsletters to participate in volunteer network monitoring activities.	X	X	X	X	X	100% of monitoring network meetings to be attended annually by member of MRSWMP group and each permit holder to recruit volunteers through at least two channels within their agency; e.g. email, paycheck stuffers, internal newsletters, etc.	MRSWMP Group & MS4 Administration

TABLE 4-1 MCM3: ILLICIT DISCHARGE & DETECTION: EPA recommends that the plan to detect and address illicit discharges (discharges to storm drains and sewers that is not composed entirely of storm water) include the following four components: procedures for locating priority areas likely to have illicit discharges; procedures for tracing the source of an illicit discharge; procedures for removing the source of the discharge; and procedures for program evaluation and assessment.										
BMP Intent	**Best Management Practice / Activity**	**BMP#**	**Implementation Plan**	**Permit Yr 1**	**Permit Yr 2**	**Permit Yr 3**	**Permit Yr 4**	**Permit Yr 5**	**Measurable Goals.**	**Implementers**
Promote the reporting of illicit discharges by having a system for receiving such reports.	Create a unified place for public to call in potential illicit discharges	3-1.a	Create agreement with 1800CLEANUP as single call-in center to report illicit discharges by zip code	X					Date agreement went live.	MRSWMP Group
		3-1.b	Advertise call-in number on MRSWMP generated media and educational materials	X	X	X	X	X	Advertised on a minimum of 8 different media pieces: 4 in English, 4 in Spanish	MRSWMP Group

BMP Intent	Best Management Practice / Activity	BMP#	Implementation Plan	Permit Yr 1	Permit Yr 2	Permit Yr 3	Permit Yr 4	Permit Yr 5	Measurable Goals.	Implementers
Promote the reporting of illicit discharges by having a system for receiving such reports.	Create a unified place for public to call in potential illicit discharges	3-1.c	Each permit holder will create an internal protocol for handling reports of potential illicit discharges within their zip code. Calls into the 1800CLEANUP # will be directed by zip code to a phone number for a specific permit holder response contact person. There will be both a "during work hours" and "after hours" phone number for each permit holder. Callers will be instructed to call 911 in the case of any immediate hazards. Each permit holder will be responsible for logging, investigating, and responding to each call. Documentation will be kept on the response and outcome of the reported incident.	X	X	X	X	X	Date protocol developed and in use.	MRSWMP Group w/MS4 Administration

BMP Intent	Best Management Practice / Activity	BMP#	Implementation Plan	Permit Yr 1	Permit Yr 2	Permit Yr 3	Permit Yr 4	Permit Yr 5	Measurable Goals.	Implementers
Promote the reporting of illicit discharges by having a system for receiving such reports.	Create a unified place for public to call in potential illicit discharges	3-1.d	Using protocol developed under BMP 3-1.c, investigate and take appropriate action on each report that is received.	X	X	X	X	X	100% of all reports of illicit discharge investigated and report on outcome of each case in the form of "closed", "ongoing enforcement", or "still investigating source".	MS4 Administration
Have accurate storm drain maps to help locate illicit discharges and/or dischargers.	Storm water system mapping	3-2.a	Develop a storm drain system map showing the location of all outfalls and the names and locations of all waters of the state and other MS4s that receive discharges from those outfalls	20% minimum	20% minimum	20% minimum	20% minimum	20% minimum	100 % of MRSWMP jurisdiction to be mapped by end of permit year 5.	MS4 Administration
		3-2.b	Update maps annually to include new facilities as appropriate.		X	X	X	X	Date maps were revised	MS4 Administration

Reduce pollution from illicit connections and/or discharges.	Inventory of businesses and industries to be monitored for illicit connections and/or discharges	3-3.a	Create inventory of all Attachment 4 listed businesses and industries to be monitored for potential illicit connections and/or discharges	X					Date inventory was completed.	MS4 Administration

BMP Intent	Best Management Practice / Activity	BMP#	Implementation Plan	Permit Yr 1	Permit Yr 2	Permit Yr 3	Permit Yr 4	Permit Yr 5	Measurable Goals.	Implementers
Reduce pollution from illicit connections and/or discharges.	Revise current inspection programs to include determination of the existence of illicit connections and/or discharges; i.e., sewer overflows, fluid dumping in catch basins etc.	3-4.a	Develop inspection checklist		X				Date inspection list was agreed upon by MRSWMP group	MRSWMP group
		3-4.b	Develop protocol for taking action against identified illicit connectors / dischargers		X				Date protocol was agreed upon	MRSWMP Group and MS4 Administration
		3-4.c	Create specific illicit connection training program & materials for municipal employees and inspectors		X				Materials distributed to 100% of appropriate municipal public works department heads for distribution to employees / inspectors	MRSWMP Group and MS4 Administration
		3-4.d	Inspect businesses for illicit connections through existing municipal inspections and employee awareness			X	X	X	Minimum of 5% of inventoried businesses per year	MS4 Administration
		3-4.e	Create hotline for public reporting of illicit connections	X					See BMP 3-1.a	MRSWMP Group
		3-4.f	Develop protocol for responding to reported illicit connections	X					See BMP 3-1.c	MS4 Administration

BMP Intent	Best Management Practice / Activity	BMP#	Implementation Plan	Permit Yr 1	Permit Yr 2	Permit Yr 3	Permit Yr 4	Permit Yr 5	Measurable Goals	Implementers
Reduce pollution from illicit connections and/or discharges.	Revise current inspection programs to include determination of the existence of illicit connections and/or discharges; i.e., sewer overflows, fluid dumping in catch basins etc.	3-4.g	Take action as necessary to eliminate 100% of the illicit connections that are identified in this year	X	X	X	X	X	100% of all reports of illegal connections investigated and report on outcome of each case in the form of "closed", "ongoing enforcement", or "still investigating source".	MS4 Administration

BMP Intent	Best Management Practice / Activity	BMP#	Implementation Plan	Permit Yr 1	Permit Yr 2	Permit Yr 3	Permit Yr 4	Permit Yr 5	Measurable Goals.	Implementers
Reduce pollution from illegal disposal activities	Adopt an ordinance with standards for storm water pollution prevention. Ordinance to include definitions of illegal disposal activities, including requirements pertaining to mat wash downs, hood cleaning, etc., and requiring firms to notify Public Works of all such cleaning activities, with penalties for violations. Ordinance will also outline responsibility for any clean up determined necessary.	3-5.a	The intention is to develop a single template ordinance which will be adopted by each municipality and will cover all aspects of storm water pollution and prevention associated with illegal disposal activities. For MS4 urban areas meeting the Phase II Permit Attachment 4 criteria, their final adopted ordinance will have to meet subject criteria.	X					Date template ordinance agreed upon	MS4 Administration in cooperation with MRSWMP group
	Develop illegal disposal definitions and policies and procedures guidance document	3-5.b	Develop template guidance document for illegal disposal activity policies and procedures		X				Date guidance document completed	MRSWMP Group
		3-5.c	Adopt guidance document revised to be specific to each permit holder's needs by each permit holder		X				Date revised guidance document adopted by MS4	MS4 Administration

BMP Intent	Best Management Practice / Activity	BMP#	Implementation Plan	Permit Yr 1	Permit Yr 2	Permit Yr 3	Permit Yr 4	Permit Yr 5	Measurable Goals.	Implementers
Reduce pollution from illegal disposal activities	Develop illegal disposal definitions and policies and procedures guidance document	3-5.d	Adopt ordinance revised to be specific to each permit holder's needs through appropriate City Council procedures		X				Date ordinance adopted by MS4	MS4 Administration
		3-5.e	Train appropriate staff on the adopted ordinance			X	X	X	100 % of existing appropriate staff trained by year 3, then all new employees every year after that	MS4 Administration
		3-5.f	Implement ordinance			X	X	X	Date ordinance implemented	MS4 Administration
Reduce pollution from recreational vehicles and boats	Inspection program to ensure compliance from RVs & boats	3-6.a	Create list of all RV & boat storage and launch areas where discharges potentially could take place	X					Date complete inventory created	MS4 Administration
		3-6.b	Create inspection list for use when inspecting RV & boat storage and launch areas		X				Date checklist created	MRSWMP Group
		3-6.c	Inspect each RV and boat storage and launch area annually, and take action to correct any observed violations of the discharge ordinance			X	X	X	100% of RV & boat use areas inspected annually	MS4 Administration

BMP Intent	Best Management Practice / Activity	BMP#	Implementation Plan	Permit Yr 1	Permit Yr 2	Permit Yr 3	Permit Yr 4	Permit Yr 5	Measurable Goals.	Implementers
Inform employees, businesses, and the general public of the hazards that are generally associated with illegal discharges and improper disposal of waste.	Implement a permit boundary-wide education program addressing the negative effects on water quality through illegal discharges, improper waste disposal and other non-storm water discharges.	3-7.a	See BMP 1-1.a and Appendix E for Public Education and Outreach Program	X	X	X	X	X	Date plan completed and implemented	MRSWMP Group in partnership with MBNMS

TABLE 4-1 MCM4: CONSTRUCTION SITE STORM WATER RUNOFF CONTROL: The permit holders must develop a program to control the discharge of pollutants from construction sites = 1 one acre size. The program must include review of Storm Water Pollution and Prevention Plans, inspection of construction sites and enforcement actions against violators.										
BMP Intent	**Best Management Practice / Activity**	**BMP#**	**Implementation Plan**	**Permit Yr 1**	**Permit Yr 2**	**Permit Yr 3**	**Permit Yr 4**	**Permit Yr 5**	**Measurable Goals.**	**Implementers**
Reduce pollution from construction sites by developing guidelines and standards for construction site runoff. These will address erosion and sediment controls, and shall contain requirements for construction site operators to: implement appropriate erosion and sediment control BMPs; to control waste that may cause adverse impacts to water quality such as discarded building materials, concrete truck washout, paint and plastering wash down, chemicals, litter, and sanitary waste at the construction site.	Adopt an ordinance with standards for storm water pollution prevention associated with construction activities. Ordinance to include standards for general construction site waste management for construction activities as defined by the General Construction Storm Water Permit.	4-1.a	The intention is to develop a single template ordinance which will be adopted by each municipality and will cover all aspects of storm water pollution and prevention associated with construction activities. For MS4 urban areas meeting the Phase II Permit Attachment 4 criteria, their final adopted ordinance will have to meet subject criteria.	X					Date template ordinance was completed	MS4 Administration in cooperation with MRSWMP group

BMP Intent	Best Management Practice / Activity	BMP#	Implementation Plan	Permit Yr 1	Permit Yr 2	Permit Yr 3	Permit Yr 4	Permit Yr 5	Measurable Goals.	Implementers
Reduce pollution from construction sites by developing guidelines and standards for construction site runoff. These will address erosion and sediment controls, and shall contain requirements for construction site operators to: implement appropriate erosion and sediment control BMPs; to control waste that may cause adverse impacts to water quality such as discarded building materials, concrete truck washout, paint and plastering wash down, chemicals, litter, and sanitary waste at the construction site.	Develop construction site BMP policies and procedures guidance document	4-1.b	Develop template construction site BMP policies and procedures guidance document		X				Date guidance document completed	MRSWMP Group
		4-1.c	Adopt guidance document revised by each permit holder to be specific to each permit holder's needs			X			Date revised guidance document adopted by MS4	MS4 Administration
		4-1.d	Adopt ordinance revised to be specific to each permit holder's needs through appropriate City Council procedures			X			Date ordinance adopted by MS4	MS4 Administration
		4-1.e	Train appropriate staff on the adopted ordinance			X	X	X	100 % of existing appropriate staff trained by year 3, then all new employees every year after that	MS4 Administration
		4-1.f	Implement ordinance and guidance document.			X			Date ordinance implemented	MS4 Administration

BMP Intent	Best Management Practice / Activity	BMP#	Implementation Plan	Permit Yr 1	Permit Yr 2	Permit Yr 3	Permit Yr 4	Permit Yr 5	Measurable Goals.	Implementers
Reduce pollution from construction sites by developing guidelines and standards for construction site runoff. These will address erosion and sediment controls, and shall contain requirements for construction site operators to: implement appropriate erosion and sediment control BMPs; to control waste that may cause adverse impacts to water quality such as discarded building materials, concrete truck washout, paint and plastering wash down, chemicals, litter, and sanitary waste at the construction site.	Develop and implement procedures for site plan review, including consideration of potential water quality impacts	4-2.a	Develop site plan review procedures using reference materials such as the CASQA (California Storm Water Quality Association) BMP Handbooks for revisions to plans.		X				Date site plan procedures went in place	MS4 Administration in cooperation with MRSWMP group
		4-2.b	Train appropriate staff of procedures			X	X	X	100 % of existing appropriate staff trained by year 3, then all new employees every year after that	MS4 Administration
		4-2.c	Implement new site plan review procedures			X	X	X	Date of implementation	MS4 Administration
	Develop and implement procedures for site inspection and enforcement of BMP control measures	4-3.a	Develop ranking criteria and site inspection procedures		X				Date ranking criteria and site inspection procedures were in place	MS4 Administration in cooperation with MRSWMP group

BMP Intent	Best Management Practice / Activity	BMP#	Implementation Plan	Permit Yr 1	Permit Yr 2	Permit Yr 3	Permit Yr 4	Permit Yr 5	Measurable Goals.	Implementers
Reduce pollution from construction sites by developing guidelines and standards for construction site runoff. These will address erosion and sediment controls, and shall contain requirements for construction site operators to: implement appropriate erosion and sediment control BMPs; to control waste that may cause adverse impacts to water quality such as discarded building materials, concrete truck washout, paint and plastering wash down, chemicals, litter, and sanitary waste at the construction site.	Develop and implement procedures for site inspection and enforcement of BMP control measures.	4-3.b	Create progressive enforcement protocol		X				Date enforcement protocol in place	MS4 Administration in cooperation with MRSWMP group
		4-3.c	Train appropriate staff on procedures		X	X	X	X	100 % of existing appropriate staff trained by year 2, then all new employees every year after that, with periodic refresher training provided to staff after their initial training	MS4 Administration
		4-3.d	Inspect the construction sites subject to the storm water pollution prevention ordinance per ranking criteria and procedures developed in BMP 4-3.a, and take appropriate action to have any observed violations corrected			X	X	X	100% implementation of goals set in ranking criteria developed in BMP 4-3.a	MS4 Administration in cooperation with MRSWMP group

BMP Intent	Best Management Practice / Activity	BMP#	Implementation Plan	Permit Yr 1	Permit Yr 2	Permit Yr 3	Permit Yr 4	Permit Yr 5	Measurable Goals.	Implementers
Reduce pollution from construction sites by developing guidelines and standards for construction site runoff. These will address erosion and sediment controls, and shall contain requirements for construction site operators to: implement appropriate erosion and sediment control BMPs; to control waste that may cause adverse impacts to water quality such as discarded building materials, concrete truck washout, paint and plastering wash down, chemicals, litter, and sanitary waste at the construction site.	Develop and implement procedures for receipt and consideration of information submitted by the public regarding storm water runoff impacts associated with construction projects.	4-4.a	Develop procedures for receipt of information from public (Cover under BMP 3-1.a)	X					Date procedures in place	MS4 Administration in cooperation with MRSWMP group

BMP Intent	Best Management Practice / Activity	BMP#	Implementation Plan	Permit Yr 1	Permit Yr 2	Permit Yr 3	Permit Yr 4	Permit Yr 5	Measurable Goals.	Implementers
Reduce pollution from construction sites by developing guidelines and standards for construction site runoff. These will address erosion and sediment controls, and shall contain requirements for construction site operators to: implement appropriate erosion and sediment control BMPs; to control waste that may cause adverse impacts to water quality such as discarded building materials, concrete truck washout, paint and plastering wash down, chemicals, litter, and sanitary waste at the construction site.	Develop and implement procedures for receipt and consideration of information submitted by the public regarding storm water runoff impacts associated with construction projects.	4-4.b	Establish internal protocol for how information received will be considered, handled, and responded to. (See BMP 3-1.c)	X					Date protocol in place	MS4 Administration
	(See Appendix E for Public Education and Outreach Program)	4-4.c	Educate public on the procedures for reporting potential impacts by construction projects on run off (See BMP 1-1.a)		X	X	X	X	Number of methods used to educate public about impacts of construction on storm water quality	MS4 Administration in cooperation with MRSWMP group

TABLE 4-1 MCM5: POST-CONSTRUCTION STORM WATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVLOPMENT: Permit holders must educate the development community about the importance of the storm water program. This will include adopting standards for incorporating environmental measures into new construction that minimize storm water impacts.										
BMP Intent	**Best Management Practice / Activity**	**BMP#**	**Implementation Plan**	**Permit Yr 1**	**Permit Yr 2**	**Permit Yr 3**	**Permit Yr 4**	**Permit Yr 5**	**Measurable Goals.**	**Implementers**
Reduce post-construction pollution by developing post construction guidelines and standards for storm water runoff from new development and redevelopment. These will address such pollutants as sediments, chemicals, oils and grease, metals, and nutrients, as well as erosion and flooding.	Adopt an ordinance with standards for storm water pollution prevention associated with storm water systems installed in new developments and redevelopments. Ordinance to include standards for the design, operation, and maintenance of post-construction storm water pollution prevention systems in new developments and redevelopment.	5-1.a	The intention is to develop a single template ordinance which will be adopted by each municipality and will cover all aspects of storm water pollution and prevention associated with new developments and redevelopment. For MS4 urban areas meeting the Phase II Permit Attachment 4 criteria, their final adopted ordinance will have to meet subject criteria.	X					Date template ordinance completed	MS4 Administration in cooperation with MRSWMP group
	Develop post-construction BMP policies and procedures guidance document.	5-1.b	Develop template post-construction BMP policies and procedures guidance document		X				Date guidance document completed	MRSWMP Group

BMP Intent	Best Management Practice / Activity	BMP#	Implementation Plan	Permit Yr 1	Permit Yr 2	Permit Yr 3	Permit Yr 4	Permit Yr 5	Measurable Goals.	Implementers
Reduce post-construction pollution by developing post construction guidelines and standards for storm water runoff from new development and redevelopment. These will address such pollutants as sediments, chemicals, oils and grease, metals, and nutrients, as well as erosion and flooding.	Develop post-construction BMP policies and procedures guidance document	5-1.c	Adopt guidance document revised to be specific to each permit holder's needs by each permit holder		X				Date guidance document adopted by permit holder	MS4 Administration
		5-1.d	Adopt ordinance revised to be specific to each permit holder's needs through appropriate City Council procedures		X				Date ordinance adopted by MS4	MS4 Administration
		5-1.e	Train appropriate staff on the adopted ordinance			X	X	X	100 % of existing appropriate staff trained by year 3, then all new employees every year after that	MS4 Administration
		5-1.f	Implement ordinance and guidance document			X			Date ordinance implemented	MS4 Administration
	Develop and implement procedures for review of construction plans.	5-2.a	Develop plan review procedures using reference materials such as the CASQA (California Storm Water Quality Association) BMP Handbooks for revisions to plans.		X				Date site plan procedures implemented.	MS4 Administration in cooperation with MRSWMP group

BMP Intent	Best Management Practice / Activity	BMP#	Implementation Plan	Permit Yr 1	Permit Yr 2	Permit Yr 3	Permit Yr 4	Permit Yr 5	Measurable Goals.	Implementers
Reduce post-construction pollution by developing post construction guidelines and standards for storm water runoff from new development and redevelopment. These will address such pollutants as sediments, chemicals, oils and grease, metals, and nutrients, as well as erosion and flooding.	Develop and implement procedures for review of construction plans.	5-2.b	Review 100% of project plans subject to the post-construction storm water pollution prevention ordinance for compliance with this ordinance during design and construction			X	X	X	100% of site plans reviewed for compliance	MS4 Administration
	Develop and implement procedures for post-construction site inspection and enforcement of storm water pollution control systems	5-3.a	Develop site inspection procedures and guidance document for self-certification by facility owners		X				Date site inspection procedures implemented.	MS4 Administration in cooperation with MRSWMP group
		5-3.b	Develop agreement to be signed by all facility owners that they will comply with inspection & self-certification requirements to ensure post-construction BMP compliance		X				Date agreement developed	MS4 Administration in cooperation with MRSWMP group
		5-3.c	Require annual inspection and self-certification by facility owner		X	X	X	X	100% of construction sites inspected and self-certified	MS4 Administration

BMP Intent	Best Management Practice / Activity	BMP#	Implementation Plan	Permit Yr 1	Permit Yr 2	Permit Yr 3	Permit Yr 4	Permit Yr 5	Measurable Goals.	Implementers
Reduce post-construction pollution by developing post construction guidelines and standards for storm water runoff from new development and redevelopment. These will address such pollutants as sediments, chemicals, oils and grease, metals, and nutrients, as well as erosion and flooding.	Enforcement for non compliance with inspection and self-certification process	5-4.a	MS4 will impose fines per agreement developed in BMP 5-3.b to finance compliance and certification.			X	X	X	100% of construction sites inspected and self-certified	MS4 Administration in cooperation with MRSWMP group

TABLE 4-1 MCM6: POLLUTION PREVENTION / GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS: Permit holders must examine their own activities and develop a program to minimize the discharge of pollutants from the corporation yard, fleet services, and other permit holder owned facilities. This also includes monitoring street sweeping programs to track performance.										
BMP Intent	**Best Management Practice / Activity**	**BMP#**	**Implementation Plan**	**Permit Yr 1**	**Permit Yr 2**	**Permit Yr 3**	**Permit Yr 4**	**Permit Yr 5**	**Measurable Goals.**	**Implementers**
Minimize pollution from improper discharge or disposal of materials.	Develop and implement an education and training program for employees about the impacts of storm water pollution from municipal activities and hazardous materials disposal, and how to implement the selected BMPs to reduce these impacts	6-1.a	Develop template municipal activities training program for municipal employees	X					Date template training program completed.	MS4 Administration in cooperation with MRSWP group and MBNMS
		6-1.b	Train appropriate municipal employees		X	X	X	X	100 % of existing appropriate staff trained by year 2, then all new employees every year after that	MS4 Administration in cooperation with MRSWP group
	Inspection program of municipal hazardous materials storage facilities	6-2.a	Develop proper inspection procedures and guidelines for proper hazardous materials storage using reference materials such as the CASQA (California Storm Water Quality Association) BMP Handbooks for revisions to plans.		X				Date inspection procedures & guidelines completed	MS4 Administration in cooperation with MRSWP group

BMP Intent	Best Management Practice / Activity	BMP#	Implementation Plan	Permit Yr 1	Permit Yr 2	Permit Yr 3	Permit Yr 4	Permit Yr 5	Measurable Goals.	Implementers
Minimize pollution from improper discharge or disposal of materials.	Inspection program of municipal hazardous materials storage facilities	6-2.b	Train appropriate staff on proper inspection procedures			X	X	X	100 % of existing appropriate staff trained by year 3, then all new employees every year after that	MS4 Administration in cooperation with MRSWP group
		6-2.c	Implement inspection program			X	X	X	100% of municipal hazardous materials storage facilities inspected each year	MS4 Administration
Minimize pollution from used motor oil being disposed of improperly.	Develop and implement procedures for proper disposal of used motor oil	6-3.a	Develop procedures for proper disposal of used motor oil	X					Date procedures put in place	MS4 Administration
		6-3.b	Train appropriate staff on proper inspection procedures		X	X	X	X	100 % of existing appropriate staff trained by year 2, then all new employees every year after that	MS4 Administration in cooperation w/ MRSWMP Group
		6-3.c	Implement inspection program		X				Date inspection program implemented	MS4 Administration

BMP Intent	Best Management Practice / Activity	BMP#	Implementation Plan	Permit Yr 1	Permit Yr 2	Permit Yr 3	Permit Yr 4	Permit Yr 5	Measurable Goals.	Implementers
Minimize pollution from landscaping & lawn care management and pest control management activities.	Develop and implement a program that effectively manages landscaping and lawn care activities to minimize the potential for storm water pollution.	6-4.a	Perform spraying during times where rain is not predicted	X	X	X	X	X	100% of spraying done when rain is not predicted	MS4 Administration
		6-4.b	Protect all stock piled materials from erosion such as covering , placing away from all watercourses and storm drain inlets, etc..	X	X	X	X	X	100% of stock piled materials protected from erosion	MS4 Administration
		6-4.c	Implement procedures to minimize irrigation runoff such as using automatic timers, drip irrigation, pop up sprinkler heads, irrigating slowly, inspecting sprinklers while running and adjusting, using drought tolerant plants, etc.	X	X	X	X	X	Irrigation minimization measures given first priority to be used in landscaping	MS4 Administration
		6-4.d	Utilize integrated pest management (IPM) techniques whenever possible for fertilizer, pesticide, and vegetation management	X	X	X	X	X	IPM Techniques given first priority for use in pest management	MS4 Administration

BMP Intent	Best Management Practice / Activity	BMP#	Implementation Plan	Permit Yr 1	Permit Yr 2	Permit Yr 3	Permit Yr 4	Permit Yr 5	Measurable Goals.	Implementers
Minimize pollution from landscaping & lawn care management and pest control management activities.	Develop and implement a program that effectively manages landscaping and lawn care activities to minimize the potential for storm water pollution.	6-4.e	Train appropriate staff on proper lawn care management techniques to prevent storm water pollution	X	X	X	X	X	100 % of existing appropriate staff trained by year 1, then all new employees every year after that	MS4 Administration in cooperation w/ MRSWMP Group
Minimize pollution for improper discharge of chlorinated and/or brominated water from swimming pools & spas.	Develop and implement procedures to ensure the dechlorination and/or debromination of pool water prior to discharge to the storm water system	6-5.a	Develop procedures for pool water discharge		X				Pool water dechlorinated and/or debrominated prior to discharge 100% of the time	MS4 Administration in cooperation with MRSWMP Group
Minimize pollution from street and parking lot cleaning.	Conduct sweeping on a frequent and regular basis and focus sweeping schedule on high impact/dry weather sites	6-6.a	Conduct sweeping on a regular basis	X	X	X	X	X	Sweep on determined schedule appropriate for each MS4	MS4 Administration
Minimize pollution from automotive maintenance activities.	Develop and implement a program to prevent pollutants from automotive activities, such as vehicle fluids, from entering storm drains	6-7.a	Provide designated area for all vehicle maintenance	X	X	X	X	X	100% of permit holders have designated area for vehicle maintenance	MS4 Administration

BMP Intent	Best Management Practice / Activity	BMP#	Implementation Plan	Permit Yr 1	Permit Yr 2	Permit Yr 3	Permit Yr 4	Permit Yr 5	Measurable Goals.	Implementers
Minimize pollution from automotive maintenance activities	Develop and implement a program to prevent pollutants from automotive activities, such as vehicle fluids, from entering storm drains	6-7.b	Move maintenance and repair activities indoors or under a covered area whenever possible	X	X	X	X	X	100% maintenance and repair activities moved indoors or covered area whenever possible	MS4 Administration
		6-7.c	Stencil all storm drain inlets in corporate yard area (See BMP 2-2.c)	X	X	X	X	X	100% of storm drain inlets in corporate yard stenciled by year 1 and any new inlets which may be created immediately after being built	MS4 Administration in cooperation w/ MRSWMP and MBNMS
		6-7.d	Collect all leaking or dripping fluids in drip pans or containers and dispose/recycle properly	X	X	X	X	X	100% of all leaks or spills contained and disposed of properly	MS4 Administration

BMP Intent	Best Management Practice / Activity	BMP#	Implementation Plan	Permit Yr 1	Permit Yr 2	Permit Yr 3	Permit Yr 4	Permit Yr 5	Measurable Goals.	Implementers
Minimize pollution from automotive maintenance activities.	Develop and implement a program to prevent pollutants from automotive activities, such as vehicle fluids, from entering storm drains.	6-7.e	Store materials and wastes under cover whenever possible	X	X	X	X	X	100% of materials stored under cover whenever possible	MS4 Administration
		6-7.f	Do not dispose of oil filters in trash cans. Contact oil supplier or recycler for recycle bin	X	X	X	X	X	100% of waste oil filters recycled	MS4 Administration
		6-7.g	Train all employees repairing municipal vehicles on proper pollution prevention techniques		X	X	X	X	100 % of existing appropriate staff trained by year 2, then all new employees every year after that every year after that.	MS4 Administration in cooperation w/ MRSWMP group

BMP Intent	Best Management Practice / Activity	BMP#	Implementation Plan	Permit Yr 1	Permit Yr 2	Permit Yr 3	Permit Yr 4	Permit Yr 5	Measurable Goals.	Implementers
Minimize pollution from municipal vehicle washing activities	Develop and implement a program to prevent pollutants from washing municipal vehicles, such as vehicle fluids and phosphate soaps, from entering storm drains.	6-8.a	Vehicle & equipment washing facilities equipped with storm water pollution control measures from reference materials such as the CASQA (California Storm Water Quality Association) BMP Handbooks.			X	X	X	100% of vehicle washing facilities are equipped with storm water pollution control measures	MS4 Administration
		6-8.b	Hoses with nozzles that have automatic shut off when left unattended	X	X	X	X	X	100% of hoses for vehicle washing have shut off nozzles	MS4 Administration
		6-8.c	Vehicles washed in area that does not allow detergents to flow to storm drain system			X	X	X	100% of chosen wash areas do not drain to storm drain system	MS4 Administration
Minimize pollution from municipal vehicle washing activities		6-8.d	Trash container supplied in vehicle wash area	X	X	X	X	X	Trash container present in 100% of municipal vehicle washing areas	MS4 Administration

BMP Intent	Best Management Practice / Activity	BMP#	Implementation Plan	Permit Yr 1	Permit Yr 2	Permit Yr 3	Permit Yr 4	Permit Yr 5	Measurable Goals.	Implementers
Minimize pollution from municipal vehicle washing activities	Develop and implement a program to prevent pollutants from washing municipal vehicles, such as vehicle fluids and phosphate soaps, from entering storm drains	6-8.e	Training of municipal employees in proper washing techniques			X	X	X	100 % of existing appropriate staff trained by year 1, then all new employees every year after that	MS4 Administration in cooperation w/ MRSWMP group
		6-8.f	Vehicle washing facilities inspected for compliance with reference materials such as the CASQA (California Storm Water Quality Association) BMP handbooks.			X	X	X	100% of municipal vehicle washing areas inspected quarterly	MS4 Administration
Minimize pollution from roadway and bridge maintenance.	Develop and implement policies and procedures to prevent pollutants from bridge and street maintenance activities, such as paving and painting work, from entering storm drains	6-9.a	Regular street sweeping: (See BMP 6-6.a)	X	X	X	X	X	Sweep on determined schedule appropriate for each MS4	MS4 Administration
		6-9.b	Schedule all pavement marking for dry weather	X	X	X	X	X	100% of all pavement marking scheduled for dry weather	MS4 Administration
		6-9.c	Transfer and load all paint away from storm drain inlets	X	X	X	X	X	100% of all paint transferred and loaded away from storm drain inlets	MS4 Administration

BMP Intent	Best Management Practice / Activity	BMP#	Implementation Plan	Permit Yr 1	Permit Yr 2	Permit Yr 3	Permit Yr 4	Permit Yr 5	Measurable Goals.	Implementers
Minimize pollution from roadway and bridge maintenance	Develop and implement policies and procedures to prevent pollutants from bridge and street maintenance activities, such as paving and painting work, from entering storm drains	6-9.d	Protect storm drain inlets prior to road work	X	X	X	X	X	100% of storm drain inlets protected prior to road work	MS4 Administration
		6-9.e	Protect all stockpiled materials from erosion such as covering , placing away from all watercourses and storm drain inlets, etc.	X	X	X	X	X	100% of stock piled materials protected from erosion.	MS4 Administration
		6-9.f	Collect all stockpiles, excess, and sweepings from street projects and dispose of properly	X	X	X	X	X	100% of stockpiles and sweepings collected and disposed of properly	MS4 Administration
Minimize pollution from contaminants accumulated in storm sewer systems.	Develop and implement a program of regularly cleaning storm drains and inlets to prevent accumulated pollutants from being discharged with the storm water	6-10.a	Stencil catch basins and inlets as needed as prevention measure: (See BMP 2-2.c)	X	X	X	X	X	100% of appropriate catch basins stenciled	MS4 Administration in cooperation w/ MRSWMP and MBNMS

BMP Intent	Best Management Practice / Activity	BMP#	Implementation Plan	Permit Yr 1	Permit Yr 2	Permit Yr 3	Permit Yr 4	Permit Yr 5	Measurable Goals.	Implementers
Minimize pollution from contaminants accumulated in storm sewer systems	Develop and implement a program of regularly cleaning storm drains and inlets to prevent accumulated pollutants from being discharged with the storm water	6-10.b	Inspect catch basins and inlets annually prior to rainy season	X	X	X	X	X	Minimum 35% of catch basins and inlets to be inspected annually on a rotating basis to cover 100% every 3 years	MS4 Administration
		6-10.c	Clean and repair catch basins, inlets and piping as identified through inspections as needed prior to November 1st annually	X	X	X	X	X	By November 1st , annually, address cleaning and repair needs of prioritized catch basins, inlets & piping as identified during inspections	MS4 Administration
		6-10.d	Re-inspect identified problem areas of debris accumulation during wet season	X	X	X	X	X	Re-inspect 100% of problem areas	MS4 Administration
		6-10.e	Keep documentation of inspections and cleanings	X	X	X	X	X	Documentation kept on file	MS4 Administration

Appendix A

Notices of Intent from Each Member Entity

Appendix B

Memorandum of Agreement
for the
Monterey Regional Storm Water Pollution Prevention Program

MEMORANDUM OF AGREEMENT

MONTEREY REGIONAL STORM WATER POLLUTION PREVENTION PROGRAM

THIS AGREEMENT, is made and entered into this _____ day of _____, 2002, by and between the MONTEREY REGIONAL WATER POLLUTION CONTROL AGENCY, hereinafter referred to as "AGENCY", a Joint Powers Authority (JPA) organized under the laws of the State of California, and the following entities, each of which is hereinafter referred to as "PERMITTEE" or collectively as "PERMITTEES":

CITY OF PACIFIC GROVE, a municipal corporation of the State of California;
CITY OF MONTEREY, a municipal corporation of the State of California;
CITY OF SEASIDE, a municipal corporation of the State of California;
CITY OF SAND CITY, a municipal corporation of the State of California;
CITY OF DEL REY OAKS, a municipal corporation of the State of California;
CITY OF MARINA, a municipal corporation of the State of California;
CITY OF CARMEL-BY-THE-SEA, a municipal corporation of the State of California;
COUNTY OF MONTEREY, a political subdivision of the State of California, and
PEBBLE BEACH COMPANY, a California general partnership.

The AGENCY and the above-mentioned entities may also hereinafter be collectively referred to as "PARTIES" or individually as "PARTY."

RECITALS:

A. The Federal Clean Water Act (CWA) requires certain municipalities and industrial facilities to obtain a National Pollutant Discharge Elimination System (NPDES) permit for the discharge of storm water to navigable water. NPDES permits are also required for any storm water discharge which the Federal Environmental Protection Agency (EPA) or a state has determined contributes to a violation of a water quality standard, or is a significant contributor of pollutants to surface waters.

B. The CWA further required EPA to promulgate regulations for initial NPDES permit applications for storm water discharges. The EPA promulgated such regulations in November 1990

C. The EPA has delegated authority to the California State Water Resources Control Board (SWRCB) to administer the NPDES permit process within California and, in turn, the SWRCB has delegated authority to the California Regional Quality Control Board – Central Coastal Basin (RWQCB-CCB) to administer the NPDES permit process within its region.

D. Pursuant to the CWA and EPA regulations, the RWQCB-CCB is expected to adopt orders further defining the program that the PARTIES are to develop and implement.

E. In and for the mutual interest of the PERMITTEES, the PERMITTEES wish to develop and implement the Program by entering into this Agreement for the purpose of cooperating to efficiently and economically comply with NPDES requirements.

NOW, THEREFORE, THE PARTIES HERETO FURTHER AGREE, AS FOLLOWS:

Section 1. Monterey Regional Storm Water Pollution Prevention Program

1.01. The Monterey Regional Storm Water Pollution Prevention Program ("Program") is intended to fulfill certain obligations of the PERMITTEES with regard to EPA's Phase 2 Storm Water NPDES requirements. These requirements are expected to be imposed upon the PARTIES by an NPDES permit that will be issued collectively to all of the PERMITTEES by the RWQCB-CCB at a future date

1.02 The Program is a collective effort and implementation of area-wide activities, designed to benefit all PERMITTEES.

Section 2. Management Committee

2.01 A Management Committee is hereby created to provide for overall Program coordination, review, and budget oversight, with respect to the NPDES Permit.

2.02 The Management Committee adopts the Bylaws contained in Exhibit "A" for its governance. The Management Committee may from time to time revise these Bylaws by formal action of the Management Committee

2.03 The Management Committee is the official management and oversight body of the Program. The Management Committee shall direct and guide the Program and review and approve the Program Budget. The Management Committee shall consider permit compliance, including benefit to a majority of the PERMITTEES, as a primary objective in approving Program tasks and corresponding budgets.

2.04 The Management Committee shall periodically re-evaluate and make recommendations to the PERMITTEES concerning reallocation of the proportion of the annual Program contribution that each PERMITTEE shall pay.

2.05 The voting membership of the Management Committee shall consist of one designated voting representative from each PERMITTEE. An alternative voting representative may be appointed by each PERMITTEE.

2.06 A quorum of the Management Committee shall be achieved when voting representatives from at least fifty percent (50%) of the PERMITTEES are present at any Management Committee meeting.

2.07 Unless otherwise advised by the Program Attorney, meetings of the Management Committee, including any closed sessions with the Program Attorney, shall be

conducted in accordance with the "Brown Act" (Government Code Section 54950 et seq.). .

2.08 The affirmative vote of at least that number of the voting members of the Management Committee which collectively contribute at least fifty percent (50%) of the area-wide Program costs (a "Majority Vote"), is necessary to approve any financial measure brought before the Management Committee. Voting rights and weights of each PERMITTEE are defined in the Bylaws contained in Exhibit "A".

2.09 The Management Committee shall be responsible for selecting any consultant(s) or contractor(s) who are to be paid from Program funds ("Outside Contractors"), and for reviewing and approving any contracts with Outside Contractors, including the scope(s) of work, schedules of performance, use of subcontractors, and compensation for such Outside Contractors.

2.10 The Management Committee may select an attorney or firm (Program Attorney) that is experienced with the Clean Water Act and Municipal Storm Water NPDES Permits to provide legal advice to the Management Committee on all matters involving administration of the Program's NPDES Permit and such other matters upon which the Management Committee may seek legal advice or request legal representation. The Program Attorney shall not be responsible for providing legal advice related to permit compliance to individual PARTIES. The Program Attorney may provide such services under separate contract with any PARTY or PARTIES, but shall provide advance notification to all PARTIES before providing such services to identify and resolve possible issues of conflict of interest. The Program Manager may assist in coordination of activities with the Program Attorney, but shall not give direction to the Program Attorney without prior authorization from the Management Committee.

2.11 The Management Committee shall establish timelines and budgets for completion of Program tasks.

2.12 The Management Committee, through its Bylaws, may establish procedures for tracking, accounting for, and auditing the Program funds.

Section 3. Program Budget

3.01 A budget shall be adopted for each fiscal year. The fiscal year shall run from July 1 through June 30. The Budget shall be prepared and administered as described in Exhibit "B".

3.02 Not later than 60 days after the start of each fiscal year's budget cycle, the PERMITTEES shall each pay a yearly assessment into a fund established for Program operations for their assigned portion of the Program Budget. The proportionate share of the Program Budget that each PERMITTEE shall pay shall be shown and specified in the adopted fiscal year budget.
Cost-sharing between PERMITTEES shall be based on the populations within the

areas of each participating entity that are covered by the permit, unless otherwise agreed to by the PERMITTEES when the budget for each year is adopted, as described in Exhibit "B".

3.03 Except as provided in Section 6.03, the ending fund balance at the close of each fiscal year shall be disbursed annually to the PERMITTEES, or credited to the PERMITTEES' shares of the next fiscal year's costs, in accordance with the PERMITTEES' defined participation rates, as requested by each PERMITTEE.

Section 4. Program Manager

4.01 The Management Committee shall select a PARTY or Outside Contractor to act as the Program Manager for the Program.

4.02 The Program Manager shall be responsible for Program management and administration, Permit management, technical program management, and related duties as described in Exhibit "C", The Program Manager shall be paid, from Program funds in accordance with the adopted Program budget, for providing the services described hereunder. Work assignments shall be made to the Program Manager by the Management Committee and not by individual PERMITTEES. The Program Manager shall not be responsible for providing program management services related to individual PERMITTEE'S permit programs. However, the Program Manager may provide such services under separate contract with any PARTY or PARTIES, but shall provide advance notification to all PARTIES before providing such services to identify and resolve possible issues of conflict of interest.

4.03 The Program Manager shall be the treasurer of the Program funds. The Program Manager, in accordance with generally-accepted accounting procedures, shall keep the Program funds segregated from any other funds administered by the Program Manager; shall credit the Program with appropriate interest income earned on Program funds in each fiscal year; and shall not expend any funds except in accordance with the annual budget approved by the Management Committee, or as otherwise directed by the Management Committee. The Program Manager shall act in a reasonable amount of time to execute contracts with Outside Contractors, which have been requested and approved by the Management Committee. The Program Manager shall provide a copy of any contract executed on behalf of the Program to any PERMITTEE or person designated by any PERMITTEE or the Management Committee upon request. The governing body of the Program Manager, at its discretion, may delegate authority to execute agreements and contracts approved by the Management Committee, to a designated employee. Notice of any such delegation of authority shall be provided to the Management Committee.

4.04 The Program Manager may request, as part of the annual Program Budget, reimbursement for reasonable and customary costs incurred in providing the services described hereunder. Reimbursement to the Program Manager shall be subject to Management Committee review and approval as part of the Program Budget.

4.05 AGENCY shall serve as the initial Program Manager for the Program.

4.06 AGENCY may withdraw as the Program Manager upon the provision of ninety days' (90) days written notice to the Management Committee. The Management Committee may select a new Program Manager upon the provision of ninety days (90) written notice to AGENCY. In either event the Management Committee will act within the ninety-day period to determine the disposition of funds remaining in the Program Budget fund.

4.07 In the event that the Program Manager withdraws from the Program or from providing Program Manager services to the Program, or in the event that the Management Committee wishes to select a new Program Manager, another PERMITTEE may serve as a successor Program Manager. Any PERMITTEE willing to serve as successor Program Manager may be nominated by another PERMITTEE. Selection of a Program Manager must be by majority vote of the Management Committee.

Section 5. Additional Rights and Duties of the PARTIES

5.01 In addition to the participation in the Management Committee, the PERMITTEES accept and agree to perform the following duties:

1. Each will comply with the NPDES Permit conditions that apply within its jurisdictional boundaries;

2. Each will participate in Management Committee meetings and other required meetings of the PERMITTEES ;

3. Each will implement its Community-Specific Program;

4. Each will provide certain agreed upon reports to the Program for purposes of reporting, on a joint basis, compliance with applicable provisions of the NPDES Permit and the status of Program implementation; and,

5. Each will individually address inter-agency issues, agreements or other cooperative efforts.

6. Each will only be responsible for performing the duties listed above for and on behalf of its own jurisdiction.

5.02 This Agreement does not restrict the PERMITTEES from the ability to individually (or collectively) request NPDES Permit modifications and/or initiate NPDES Permit appeals for permit provisions to the extent that a provision affects an individual party (or group of PERMITTEES); however, any such PERMITTEE (or PERMITTEES) shall provide a minimum of 30-days written advance notice of

their action to the other PARTIES and allow them to comment upon or join in their action before proceeding.

Section 6. Term of Agreement

6.01 The term of this Agreement shall commence on the date the last duly authorized representative of the PARTIES executes it.

6.02 This Agreement shall terminate upon the expiration of the first NPDES Phase 2 storm water permit that is issued to the PERMITTEES, unless this term is extended by the PARTIES.

6.03 Any PARTY may terminate its participation in this Agreement by giving the Management Committee at least a thirty (30) day written notice. If a PERMITTEE terminates its participation, the terminating PERMITTEE will bear the full responsibility for its compliance with the NPDES Permit commencing on the date it terminates its participation, including its compliance with both Community-Specific and Program-wide responsibilities. Unless the termination is scheduled to be effective at the close of the fiscal year in which the notice is given, termination shall constitute forfeiture of all of the terminating PERMITTEE'S share of the Program Budget, for the fiscal year in which the termination occurred (both paid and obligated, but unpaid, amounts). In addition, unless notice of termination is provided at least ninety (90) days prior to the date established by the Management Committee for approval of the budget for the succeeding fiscal year, termination shall constitute forfeiture of all of the terminating PERMITTEE'S share of any unexpended, unencumbered funds remaining from all previous fiscal years. The cost allocations for the remaining PERMITTEES may be recalculated for the following fiscal year by the PARTIES without the withdrawing PERMITTEE'S participation.

Section 7. General Provisions

7.01 This Agreement supersedes any prior agreement among the PARTIES regarding the Program, but does not supersede any other agreements between any of the PARTIES.

7.02 This Agreement may be amended only by unanimous written agreement of the PARTIES. All PARTIES agree to bring any proposed amendment to this Agreement to their Council or Board, as applicable, within two (2) months following acceptance of the proposed amendment by the Management Committee.

7.03 This Agreement may be executed and delivered in any number of copies ("counterpart") by the PARTIES, including by means of facsimile. When each PARTY has signed and delivered at least one (1) counterpart to the Program Manager, each counterpart shall be deemed an original and, taken together, shall constitute one and the same Agreement, which shall be binding and effective as to the PARTIES hereto.

7.04 No PARTY shall, by entering into this Agreement, participating in the Management Committee, or agreeing to serve as Program Manager, and/or Program Attorney, assume or be deemed to assume responsibility for any other PARTY in complying with the requirements of the NPDES Permit. This Agreement is intended solely for the convenience and benefit of the PARTIES hereto and shall not be deemed to be for the benefit of any third party and may not be enforced by any third party, including, but not limited to, the EPA, the SWRCB, and the RWQCB-CCB, or any person acting on their behalf or in their stead.

7.05 In lieu of and notwithstanding the pro rata risk allocation which might otherwise be imposed between the PARTIES pursuant to Government Code Section 895.6, the PARTIES agree that all losses or liabilities incurred by a PARTY shall not be shared pro rata, but instead, the PARTIES agree that pursuant to the Government Code Section 895.4, each of the PARTIES hereto shall fully defend, indemnify and hold harmless each of the other PARTIES from any claim, expense or cost, damage or liability imposed for injury (as defined by Government Code Section 810.8) occurring by reason of the negligent acts or omissions or willful misconduct of the indemnifying PARTY, its officers, agents, or employees, under or in connection with or arising from any work, authority, or action taken under this Agreement, including but not limited to any non-compliance by a PARTY with its obligations under the Program NPDES Permit. No PARTY, nor any officer, Councilmember, Board member, employee or agent thereof shall be responsible for any damage or liability incurred by reason of the negligent acts or omissions or willful misconduct of the other PARTIES hereto, their officers, Councilmembers, Board members, employees or agents under or in connection with or arising from any work, authority or actions taken under this Agreement, including but not limited to any non-compliance by a PARTY with its obligations under the Program NPDES Permit.

7.06 In the event that suit shall be brought by any party to this contract, the PARTIES agree that venue shall be exclusively vested in the state courts of the County of Monterey, or, if brought in federal court, in the United States District Court handling matters arising in Monterey County. Further, the prevailing PARTY or PARTIES shall be entitled to reasonable attorney fees and costs.

IN WITNESS WHEREOF, the PARTIES hereto have executed this Agreement as of the dates shown below

MONTEREY REGIONAL WATER POLLUTION CONTROL AGENCY, a Joint Powers Authority and public agency of the State of California

Date: _____ APPROVED AS TO FORM:

By: _____ By: _____

Chair, Board of Directors

By: _____
General Manager

Legal Counsel

ATTEST:

Date: _____

By: _____

CITY OF _____, a public entity of the State of California

Date: _____

By: _____
Name, Mayor

By: _____
Name, City Manager

APPROVED AS TO FORM:

By: _____
Legal Counsel

ATTEST:

Date: _____

By: _____

EXHIBIT "A"

BYLAWS

Bylaws

1. Representation: **Representation from each PERMITTEE will be their Public Works Director, or his/her designee, and if that person is unable to attend, he or she will notify the PARTIES in advance by email naming their designated alternate representative for that meeting.**
2. **Voting:** Each PERMITTEE shall have one vote, provided that any PERMITTEE can call for a weighted vote on any issue. Weighting will be on a population basis, using the populations and numbers of votes shown in the attached Table This Table may be periodically updated by formal action of the Management Committee. Updating will normally be done when updated population figures are published by the U.S. Census Bureau, or when other updated population figures are published and formally accepted by each of the PERMITTEES. Weighted voting would be conducted as follows: If a weighted vote is called, each PERMITTEE will have the number of votes shown in the table below.

Table of Populations and Votes for Use in Weighted Voting

ENTITY	APPROXIMATE POPULATION WITHIN AREA TO BE COVERED BY STORMWATER PERMIT	NUMBER OF VOTES
Pacific Grove	15,522	7.8
Monterey	29,674	14.8
Seaside	31,696	15.8
Sand City	261	1.0
Marina	21,014	10.5
Carmel	4,081	2.0
Del Rey Oaks	1,650	1.0
County of Monterey	17,213	8.6
Pebble Beach Company	4,531	2.3
TOTAL	**125,642**	**63.8**

Note: One vote shall be provided for each 2,000 person increment of population, except that each entity shall have a minimum of one vote, even if its population is less than 2,000.

3. **Meeting Schedule:** Meetings will normally be at 2:00 p.m. at the Program Manager's offices on the fourth Wednesday of each month, unless changed by the Management Committee.

4. **Starting Time:** Meetings will start promptly at the designated starting time. Any PARTY representative that knows he/she will be unable to attend, or will be late, will notify the Chairperson, so as not to delay starting the meeting.

5. **Future Members:** If additional entities wish to join with the other PARTIES by entering into this Agreement and participating in the Program, the PARTIES will determine an appropriate method of calculating a "buy-in" cost to be paid by the new entity wishing to become a member. This buy-in cost shall at a minimum include:

   a. The full amount the new entity would have paid, if it had entered into the "Interim Memorandum of Agreement Regarding Development of a Regional Storm Water NPDES Permit" as of July 1, 2001, and,

   b. An amount to account for the delay in making payment, calculated using the Consumer Price Index or some other method deemed appropriate by the Participants Group.

EXHIBIT "B"

BUDGET AND COST-SHARING

Budget and Cost-Sharing

Prior to the start of each fiscal year, the Program Manager will prepare a Draft Budget and submit it to the Management Committee for its review. The Draft Budget will include a proposed approach for allocation of costs(cost-sharing) to each PERMITTEE. The Program Manager will revise the Draft Budget to address concerns and comments from the Management Committee, and the Management Committee will then approve and adopt a Final Budget for the fiscal year.

The Program Manager and the PERMITTEES recognize that the budget will be based on estimated costs , and that actual costs may differ from the budgeted amounts. If it appears that costs will exceed the budgeted amounts, the Program Manager will notify the Management Committee before incurring costs in excess of the budgeted amounts. If the Management Committee determines that it is appropriate to have the Program Manager incur additional costs above the budgeted amounts, the Program Manager will prepare a budget revision request and send it to the Management Committee to obtain the Committee's approval to increase the budget. Only after receiving the Management Committee's written approval to increase the budget will the Program Manager incur costs in excess of the budgeted amounts. If there are unspent funds left at the end of the fiscal year, the Program Manager will return to each PARTY the unspent portion of that PARTY'S payment , as described in Section 3 "Program Budget."

The Program Manager will establish a separate job-cost code in its accounting system, to which hours spent, and out-of-pocket costs directly related to, performing work as the Program Manager will be charged. The Program Manager will send quarterly reports to the Management Committee summarizing the work the Program Manager has performed during that quarter, the total costs of that work, and the portion of the cost allocated to each PERMITTEE . The portion of the cost allocated to the PERMITTEE will be calculated in accordance with the cost-sharing approach specified in the adopted Final Budget.

The costs for AGENCY's services as the Program Manager will consist of both direct and indirect costs. Direct costs are costs which can be tracked through time cards, invoices, record keeping systems, and other records that specifically allocate a cost to these services. Indirect costs are all other costs incurred by AGENCY in order to perform its duties as the Program Manager. Examples of the types of indirect costs that AGENCY is likely to incur are described below.

Indirect Costs

Indirect costs are defined as a cost item that cannot be identified specifically with a single cost objective in an economically feasible manner.

For the costs covered by this Agreement, indirect costs will be charged at 10% of all other direct costs.

The following are the types of indirect costs expected to be incurred in carrying out Program activities:

- Use of AGENCY financial and data processing system including network (hardware and software), and specific financial hardware (printers/modems) and software. Costs include depreciation as well as internal and external maintenance, service agreements, software support, and payroll processing.
- The use of supplies and/or services that are not feasible or not cost-effective to segregate, such as disposables, shared office supplies, forms, paper, and postage.
- Purchasing services including purchasing staff time seeking bids, communicating with vendors, preparing requisitions, and purchase orders.
- Use of existing office equipment (copiers, fax machines, calculators, typewriters, computers) and their related repair, supplies, and maintenance.
- Centralized telephone system and use of AGENCY cellular phones.
- AGENCY Administration building costs (use, utilities, insurance).
- Administrative services including agency-wide training programs (such as safety, sexual harassment), employee assistance program, and general office support.
- Use of upper level AGENCY staff for overall coordination, management and support of storm water permitting activities.

EXHIBIT "C"

DUTIES OF THE PROGRAM MANAGER

Duties of the Program Manager

The **Program Manager** will perform duties (referred to as Tasks) including, but not limited to, the following:

Task 1. Arranging for and conducting meetings of the Management Committee, including preparation of agenda materials and meeting minutes.
Task 2. Preparing draft documents for review, editing, and finalization by the Management Committee.
Task 3. Coordination with RWQCB and SWRCB on Phase 2 storm water permitting issues.
Task 4. Researching and reporting on various topics of interest to the Management Committee.
Task 5. Contracting with, and managing the work of, outside consultants to perform related work, if deemed necessary and appropriate by the Management Committee.
Task 6. Preparing the permit application.
Task 7. ***Preparing the Annual Report(s) required by the Permit, and other permit-related reports and documents, other than those that are to be prepared by the individual PERMITTEES.***
Task 8.Other activities as requested by the Management Committee.

Appendix C

State General Permit Waste Discharge Requirements
for
Storm Water Discharges
from
Small Municipal Separate Storm Sewer Systems (MS4s)
(General Permit)

Note: This document can be viewed and printed from the following website:

http://www.swrcb.ca.gov/stormwtr/docs/final_ms4_permit.pdf

Appendix D

Glossary of Terms and Acronyms

Glossary of Terms and Acronyms

Best Management Practices (BMPs) - Best management practices means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of 'waters of the United States." BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Clean Water Act (CWA) - In 1972, the U.S. Congress adopted the Federal Water Pollution Control Act which created a comprehensive set of regulations for the protection of water quality throughout the United States. This legislation, which has been amended several times, has become more commonly referred to as the Clean Water Act. It is under this legislation that the EPA has put into place the Phase I and Phase II storm water NPDES programs.

Code of Federal Regulations (CFR) – The codified compilation of Federal Regulations covering a wide range of issues. The Phase I and Phase II storm water regulations are contained within the CFRs.

Environmental Protection Agency (EPA) – The U.S. government agency responsible for protection of the environment, and which develops and administers the storm water program regulations.

General Permit – The State's NPDES permit that regulates storm water discharges from Small MS4s.The General Permit requires regulated Small MS4s (Permittees) to develop and implement a Storm Water Management Program (SWMP) designed to reduce the discharge of pollutants to the Maximum Extent Practicable (MEP) and to protect water quality. The main goal of the General Permit is to require the development and implementation of a program that takes an interdisciplinary approach to storm water. The intent is that through such an approach, storm water quality impacts will be considered in all aspects of a municipality's activities and that multiple departments within the municipality will work together to implement storm water BMPs.

Maximum Extent Practicable (MEP) - MEP is the acronym for Maximum Extent Practicable. MEP is the technology-based standard established by Congress in CWA section 402(p)(3)(B)(iii) that municipal dischargers of storm water must meet. Technology-based standards establish the level of pollutant reductions that dischargers must achieve. MEP is generally a result of emphasizing pollution prevention and source control best management practices (BMPs) primarily (as the first line of defense) in combination with treatment methods serving as a backup (additional line of defense). The MEP approach is an ever evolving, flexible and advancing concept, which considers technical and economic feasibility. As knowledge about controlling urban runoff continues to evolve, so does that which constitutes MEP. The way in which MEP is met varies between communities. The individual and collective activities elucidated in their Storm Water Management Program becomes their proposal for reducing or eliminating pollutants in storm water to the MEP.

Measurable Goal - Measurable goals are definable tasks or accomplishments that are associated with implementing best management practices.

Minimum Control Measure - A minimum control measure is a storm water program area that must be addressed (best management practices implemented to accomplish the program goal) by all regulated Small MS4s. The following six minimum control measures are required to be addressed by the regulated Small MS4s: Public Education and Outreach on storm Water Impacts, Public Involvement/Participation, Illicit Discharge Detection and Elimination, Construction Site Storm Water Runoff Control, Post-Construction Storm Water Management in New Development and Redevelopment, and Pollution Prevention/Good Housekeeping for Municipal Operations.

Model Urban Runoff Program (MURP) – The Model Urban Runoff Program (MURP) was completed in July of 1998. MURP is a comprehensive how-to guide developed for local governments to address the issues of polluted runoff in the urban environment. The MURP provides options to help small municipalities develop their own urban runoff program for the Phase II process. The guide incorporates the essential elements of a strong urban runoff program with examples of ordinances, best management practices, illicit connections, new development and redevelopment, commercial and industrial facilities, reporting forms and an education and outreach program. The MURP was prepared by the City of Monterey, City of Santa Cruz, MBNMS, California Coastal Commission, Association of Monterey Bay Area Governments (AMBAG), Woodward-Clyde Consultants, and the Central Coast Regional Water Quality Control Board with money from a State 319 (h) grant. Many other local municipal agencies acted as peer reviewers throughout the development of the MURP through semi-annual meetings of the AMBAG Stormwater Task Force, now known as the Monterey Bay Stormwater Information Exchange.

Monterey Regional Storm Water Management Program (MRSWMP) – The Storm Water Management Program for the nine participating entities.

Monterey Regional Water Pollution Control Agency (MRWPCA) – The regional agency that provides wastewater treatment and disposal services to 12 entities in the sewered portions of northern Monterey County. MRWPCA is serving as the Program Manager for the MRSWMP, and acting as the Lead Agency as defined by the SWRCB in the NOIs contained in Appendix A to this MRSWMP.

NPDES- National Pollutant Discharge Elimination System. Under this program the EPA issues permits under Section 402 of the federal Clean Water Act. The Regional Water Quality Control Boards in California have been delegated the authority to issue and administer the Phase I and Phase II storm water NPDES permits.

New Development- means land disturbing activities; structural development, including construction or installation of a building or structure, creation of impervious surfaces; and land subdivision.

Offsite Facility - An offsite facility is a geographically non-adjacent or discontinuous site that serves, or is secondary to, the primary facility and has the same owner as the primary facility. Storm water discharges from an offsite facility must be permitted if it meets the definition of a

regulated Small MS4 itself. The offsite facility may satisfy this permitting requirement if the SWMP of the primary facility addresses the offsite facility, such that the permitted area of the primary facility includes the offsite area.

Outfall - A point source at the point where a municipal separate storm sewer discharges to waters of the United States and does not include open conveyances connecting two municipal separate storm sewers, or pipes, tunnels or other conveyances which connect segments of the same stream or other waters of the United States and are used to convey waters of the United States. (40 CFR §122.26(b)(9))

Phase I and Phase II NPDES Programs – The two phases of EPA's storm water regulations. The Phase I regulations apply to municipal separate storm sewer systems (MS4s) generally serving populations of 100,000 or greater, construction activity disturbing 5 acres of land or greater, and ten categories of industrial activity. The Phase II regulations apply to MS4s serving smaller populations within "urbanized areas" as defined by the U.S. Census Bureau, and construction activity disturbing 1 acres of land or greater..

Point Source - Any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff. (40 CFR §122.2)

Redevelopment - means, on an already developed site, the creation or addition of at least 5,000 square feet of impervious surface. Redevelopment includes, but is not limited to: the expansion of a building footprint or addition or replacement of a structure; structural development including an increase in gross floor area and/ or exterior construction or remodeling; replacement of impervious surface that is not part of a routine maintenance activity; and land disturbing activities related with structural or impervious surfaces. Where redevelopment results in an increase of less than fifty percent of the impervious surfaces of a previously existing development, and the existing development was not subject to these Design Standards, the Design Standards apply only to the addition, and not to the entire development.

Regional Water Quality Control Board – The division of the SWRCB that administers and enforces water quality regulations within its region of the state. There are nine RWQCBs. The Monterey Bay area is within Region 3, which is called the Central Coastal Basin RWQCB. The RWQCBs and their staff will oversee the State General Permit for the Phase II regulations. As appropriate, they will review SWMPs and reports, require modification to SWMPs and other submissions, impose region-specific monitoring requirements, conduct inspections, and take enforcement actions against violators of the General Permit.

Regulated Small MS4 - A regulated Small MS4 is a Small MS4 that is required to be permitted for discharging storm water through its MS4 to waters of the U.S., and is designated either automatically by the U.S. EPA because it is located within an urbanized area, or designated by the SWRCB or RWQCB in accordance with the designation criteria listed at Finding 11 of the General Permit.

Separate Implementing Entity (SIE) - A Separate Implementing Entity is an entity, such as a municipality, agency, or special district, other than the entity in question, that implements parts or all of a storm water program for a Permittee. The SIE may also be permitted under 40 CFR Part 122. Arrangements of one entity implementing a program for another entity is subject to approval by the Regional Water Quality Control Board Executive Officer.

Small Municipal Separate Storm Sewer System (Small MS4) - A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) that are: (i) Owned or operated by the United States, a State, city, town, boroughs, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or designated and approved management agency under section 208 of the CWA that discharges to waters of the United States. (ii) Not defined as "large" or "medium" municipal separate storm sewer systems (iii) This term includes systems similar to separate storm sewer systems in municipalities, such as systems at military bases, large hospital or prison complexes, and highways and other thoroughfares. The term does not include separate storm sewers in very discrete areas, such as individual buildings. (40 CFR §122.26(b)(16))

Source Control BMP - means any schedules of activities, prohibitions of practices, maintenance procedures, managerial practices or operational practices that aim to prevent storm water pollution by reducing the potential for contamination at the source of pollution.

State Water Resources Control Board – The branch of State government responsible for protection of water quality, and which develops and implements policies for this purpose. The SWRCB developed the General Permit for use by entities that must be permitted under the Phase II storm water regulations.

Stormwater - Precipitation that does not infiltrate into the soil including material dissolved or suspended in it.

Storm Water Management Program (SWMP) – A program that meets all the requirements of Section D of the State's General Permit (contained in Appendix C) The SWMP shall reduce the discharge of pollutants from the regulated Small MS4 to the MEP and shall protect water quality. The SWMP shall serve as the framework for identification, assignment, and implementation of control measures/BMPs. The SWMP shall be revised to incorporate any new or modified BMPs or measurable goals developed through the Permittee's annual reporting process. The SWMP must describe the BMPs, and associated measurable goals that will fulfill the requirements of the six Minimum Control Measures described in Sections 2 and 4 of the MRSWMP. The SWMP must identify the measurable goals for each of the BMPs, including, as appropriate, the months and years for scheduled actions, including interim milestones and the frequency of the action.

Structural BMP - means any structural facility designed and constructed to mitigate the adverse impacts of storm water and urban runoff pollution (e.g. canopy, structural enclosure). The

category may include both Treatment Control BMPs and Source Control BMPs.

Treatment - means the application of engineered systems that use physical, chemical, or biological processes to remove pollutants. Such processes include, but are not limited to, filtration, gravity settling, media adsorption, biodegradation, biological uptake, chemical oxidation and UV radiation.

Treatment Control BMP - means any engineered system designed to remove pollutants by simple gravity settling of particulate pollutants, filtration, biological uptake, media adsorption or any other physical, biological, or chemical process.

Appendix E

Public Education and Outreach Program

Monterey Regional Storm Water Management Program

Public Education and Outreach Program
For
Fiscal Year 2004-2005

Background

Urban runoff is one of the leading causes of pollution across the nation. Understanding the importance of pollution prevention is critical to every community. Educating the general public and targeted audiences about the impacts of storm water and specific behaviors they can implement to protect water quality is the goal of this regional Public Education and Outreach Program (hereinafter referred to as simply the "Program").

This Program incorporates elements that small municipalities are required to address through the National Pollutant Discharge Elimination System (NPDES) Phase II permit process under the federal Clean Water Act.

The Monterey Regional Storm Water Pollution Prevention Program (MRSWPPP) is being developed and implemented by nine entities including the County of Monterey, the Pebble Beach Company, and the cities of Carmel, Del Rey Oaks, Marina, Monterey, Pacific Grove, Sand City, and Seaside. Each of these entities has submitted a Notice of Intent to comply with the State of California's National Pollutant Discharge Elimination System General Permit No. CAS000004 "Waste Discharge Requirements for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems." Within the context of the Memorandum of Agreement that created the MRSWPPP, these agencies have formed a Management Committee to develop a unified program that can be implemented regionwide.

A Management Committee comprised of representatives from each of these nine entities administers the MRSWPPP, and the Monterey Regional Water Pollution Control Agency (MRWPCA) serves as their Program Manager. All of the entities are located next to or in close proximity to the Monterey Bay National Marine Sanctuary (MBNMS), the nation's largest marine Sanctuary, which encompasses over 5,300 square miles of ocean along the California Central Coast.

As noted under the heading "Coordinating Entities" in Section 3 of this MRSWMP, the Pacific Grove Unified School District, the Monterey Peninsula Unified School District, and the Carmel Unified School District are also participating with the MRSWMP entities in this MRSWMP Public Education and Outreach Program. Each of these school districts has prepared its own Storm Water Management Program, and is relying on this Public Education and Outreach Program to fulfill some of their BMPs and Measurable Goals for Minimum Control Measure No. 1.

Introduction

The permittees under the MRSWPPP collectively support the Program, which is one of six major components of the Monterey Regional Storm Water Management Plan (MRSWMP). The

Regional Permit Group began meeting in March of 2000 to study the feasibility of having a unified program and to develop the framework for this group. Over the past two years the Management Committee has met once a month to develop the program and to select Best Management Practices (BMP's) to be included in the MRSWMP. Public Education and Outreach BMPs 1-1.a and 1-1.b are intended to educate the public about the causes of storm water pollution and the things they can do to reduce this pollution, such as "...reducing pollution from lawn and gardening activities, improper disposal of household hazardous wastes, illegal disposal activities, pet wastes, improper handling and disposal of trash, restaurant activities, and automotive activities."

The Measurable Goal for BMP 1-1.a consists of developing this Program, with measurable goals, and implementing the Program by the end of Year 1 of the five year permit term. The Program is detailed in the following pages and addresses strategies for addressing the activities described in the BMP Intent for this BMP. The Measurable Goal for BMP 1-1.b states that the Program will be reviewed and revised during Years 2 through 5 of the permit term, based on public input and experience gained while conducting the Program.

The Program will deliver consistent storm water pollution prevention messages through a variety of strategies intended to build upon existing programs, implement new activities, and to reach a broad audience. These strategies include but are not limited to: distributing brochures and educational materials such as posters and coloring books, school outreach with hands-on tools, restaurant outreach, safe pesticide alternatives outreach in garden/hardware stores, radio ads, bus ads, movie theatre preview slides, print ads, hands-on travelling storm drain exhibit, and public outreach events.

In order to build public awareness the Program Coordinator will provide continuity to the education program by using existing educational brochures, posters, radio ads, bus and movie ads, and partnering with existing local, state, and federal entities, agencies, and organizations to implement the Program.

Over time it is anticipated that the Program will influence and change public behavior, and thereby help to reduce and prevent storm water pollution. It will take persistence, consistency, and a creative educational program approach to reach targeted sectors of the community.

Several of the printed educational materials and components to be used in the Program were developed or adapted for the Model Urban Runoff Program (MURP) which was completed in July of 1998. MURP is a comprehensive how-to guide developed for local governments to address the issues of polluted runoff in the urban environment. The MURP provides options to help small municipalities develop their own urban runoff program for the Phase II process. The guide incorporates the essential elements of a strong urban runoff program with examples of ordinances, best management practices, illicit connections, new development and redevelopment, commercial and industrial facilities, reporting forms and an education and outreach program. The MURP was prepared by the City of Monterey, City of Santa Cruz, MBNMS, California Coastal Commission, Association of Monterey Bay Area Governments (AMBAG), Woodward-Clyde Consultants, and the Central Coast Regional Water Quality Control Board with money from a State 319 (h) grant. Many other local municipal agencies acted as peer reviewers throughout the development of the MURP through semi-annual meetings of the AMBAG Stormwater Task Force, now known as the Monterey Bay Stormwater Information Exchange.

Since the completion of MURP in 1998, many of the MRSWPPP permittees have used some or

all of the bilingual education pieces adapted for MURP. Those education materials serve as the foundation for this Program. Local entities have continued to build upon their storm water education programs and public involvement programs in partnership with the Monterey Bay National Marine Sanctuary. The foundation pieces of MURP will be used and built upon to give a regional and recognizable look to the Program. Other local entities using MURP educational materials include

Existing bilingual educational materials are:

Award Winning "Dirty Word" radio spots - These public service announcements (PSA's) focus on urban runoff in a creative way and target the general public. This was the winner of the Sacramento gold Addy Award 2000 for best bilingual PSA in Central California. The "Dirty Words" that have already been recorded include: Storm Drains First Flush, Used Motor Oil, and Cigarette Butts. Funding for development of the radio ads was provided by the Monterey Bay National Marine Sanctuary. Over the past four years, ongoing airtime in the Monterey region has been funded by the Monterey Bay National Marine Sanctuary, and the Cities of Monterey, Santa Cruz, Watsonville, Carmel and Pacific Grove.

Storm Drain Poster – Thanks to the generosity of the city of Los ngeles. This depicts marine life with dolphins, otters and fish below the storm drain. This is one of the most popular print pieces for businesses, schools, and outreach events. This education piece effectively gets the message of "Make the Connection" between human activities and behaviors on land and the direct effect on the marine environment. The City of Los Angeles provided the original artwork, and the Monterey Bay National Marine Sanctuary and the City of Monterey have continued to fund print runs over the past seven years.

Bus Ad / Movie Slide - the beautiful storm drain poster has been adapted for bus ads and movie theatre preview slides. Both mediums reach out to the general public and are a cost-effective means of getting the message out.

Restaurant BMP Outreach Poster - used to educate restaurant employees about reducing storm drain pollution. Adapted from the City of Los Angeles. This is given to food service businesses to be posted in employee areas as an awareness tool.

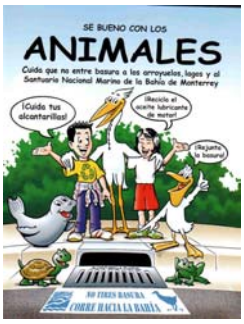
Restaurant Outreach video "Make The Connection" (7min) - used as outreach tool for restaurant staff on how to reduce urban runoff from mat washing, etc. and follows along with the BMP's depicted on the restaurant poster. The video is seven minutes in each language, English and Spanish.

Restaurant Outreach Survey- accompanies the video presentation and asks questions of the kitchen staff after viewing the video. This provides a measurement of the effectiveness of this outreach tool.

Automotive BMP Outreach Poster – adapted from the City of Los Angeles. Educates automotive employees about reducing storm drain pollution.

Monterey Bay Begins On Your Street Brochure – adapted from Humboldt County. This colorful fold out brochure is used as outreach for the general public, schools, businesses, and outreach events. It addresses urban runoff pollutants such

as: pet waste, pesticides and fertilizers, motor oil, paint, erosion, antifreeze, and car washing. It offers storm drain pollution prevention techniques and offers household hazardous waste information, the nationwide1-800-CLEANUP number and website, city and county contact information, and MBNMS contact number.



"Be Kind To Animals" – adapted from the City of Watsonville for MBNMS and the City of Monterey. The coloring book focuses on storm drain pollution and how to prevent it. It is an excellent tool for distribution at schools and outreach events, and has the nationwide 1-800-CLEANUP number and website, which directs the public to the nearest household hazardous waste site.

Program Activities

1. Elementary School Outreach

Research has shown that targeting children is an effective way to educate the community. Children are natural teachers and enthusiastic about the environment and making a difference in their community.

The school education program will target students in grade levels 4-6 throughout the jurisdictions represented by this program. The Program Coordinator will make two visits to 24 schools for a total of 48 school visits which is 7.70% of the total education budget. With 24 schools visited per year and an estimated 20 students per class, approximately 480 children will be educated in the first year of the Program. Students will take the information home and share it with family, friends, and siblings. This expands the outreach to further the community education effort.

The Program Coordinator will partner with MBNMS, which has committed to providing a part-time educator, to visit an additional 24 schools. MBNMS is donating education time to the Program with no additional cost to the group. With this partnership and additional outreach hours, the Program will reach a total of approximately 960 students in the region each year.

In the "trickle-up" method of education, children often educate busy parents, siblings and friends about issues that concern or excite them. These young people will grow up to be voters, professionals and parents. By instilling an understanding of the direct effects of their individual behaviors and the value of community involvement at an early age, they will take this with them throughout adulthood.

Two presentations per classroom will be scheduled with individual teachers. School contacts will be supplied by MBNMS, MRWPCA's Community Education Coordinator, and the County of Monterey's list of schools. Recently, the Carmel Unified, Monterey Peninsula Unified, and Pacific Grove Unified School Districts expressed an interest in joining the regional group. This ensures that effort will not be duplicated in educating school children in our region. An additional benefit is that the often cumbersome coordination efforts of finding classrooms and teachers willing to allow classroom visits will be lessened. The member School Districts will be able to provide contacts and do much of the coordinating necessary to ensure a successful program.

The two classroom visits will be comprised of the following activities:

Classroom Visit 1: Students will be given a pre-evaluation survey with questions about basic storm water knowledge. The survey will ask questions about storm water and pollution prevention tips. Each student will be asked to fill out the survey and return it to the Program Coordinator. This will give us a baseline of the students' prior knowledge of urban runoff and its effect on the Sanctuary.

Following the survey, the students will be asked to identify the watershed closest to their school and asked where it leads. This will introduce the interactive hands-on Enviroscape model demonstration. The portable model represents a cityscape, which identifies pollution sources such as neighborhoods, construction, farming areas and agriculture fields. Students are invited to "pollute" the model using cocoa as motor oil, and various colors of powdered drink
mixes to represent pesticides, soil erosion, fertilizers, trash, pet waste, and detergents from car washing. Students simulate a rain storm by using spray bottles and watch as the pollutants flow off the streets and hillsides into the principle water body labeled as the Monterey Bay National Marine Sanctuary. This activity emphasizes the land and sea connection and allows students and teachers to visually understand that urban runoff flows to the Sanctuary.

Educational materials will be left with the teacher including a bilingual storm drain poster for the classroom, bilingual Monterey Bay Begins On Your Street brochures for each student to take home, and activities for the classroom to participate in after the Program Coordinator leaves.

Classroom Visit 2: The second visit to the classroom will take place within two weeks of the first visit. The purpose of this second visit is to reinforce the learning experience from visit #1 and apply it to the outdoor world. Students will explore their school area and look for storm drains located on or near the school grounds. As students explore the grounds they will pick up trash. This exercise will emphasize an action students can do everyday- keeping trash out of storm drains. If a creek or waterbody is within walking distance and accessible, the students will also visit the site a do a trash cleanup of the area.

The classroom teacher and students will be asked to adopt their school playground and routinely pick up trash and tabulate what they pick up. To further their involvement they will be invited to start or support a recycling program at their school, participate in storm drain stenciling, and take part in National Coastal Cleanup Day. Classrooms that consistently strive to make a difference in their school or neighborhood will be recognized by the Program through certificates and local press releases.

Following this outside activity students will be given a post-evaluation survey (the same survey as the pre-evaluation survey). This will measure the effectiveness of the two classroom visits. Information will be left with the teacher for follow up activities, along with a sheet of safer alternative pesticides for the home and garden which students can bring home to their parents.

Effectiveness will be measured by counting the number of student surveys and their responses to the questions before and after outreach. Survey responses will be collected from all the students, and the information tabulated and analyzed for the annual report. MBNMS and MRWPCA will be partners in distributing information to schools. The Program Coordinator will hand out a number of brochures and posters to each group and keep track of the total distribution of

literature for school outreach.

2. Our Water Our World "OWOW" Displays

The *Our Water, Our World* promotion was developed in 1997 by San Francisco bay area clean water agencies in response to pollution problems caused by two of the most commonly used residential pesticides, chlorpyrifos (Dursban) and diazinon. Both stormwater runoff and wastewater treatment plant discharge contain levels of these two pesticides high enough to kill organisms at the base of the aquatic food web. In fact, 85 waterbodies in California are listed by EPA as impaired due to diazinon. In the *Our Water, Our World* promotion, sponsoring agencies provide each participating store with fact sheets about managing common pests, along with an updated list of less toxic pest control products recommended for sale. The fact sheets describe less-toxic pest control methods that are acceptable alternatives to the program's two "target" pesticides.

Under a State Water Resources Control Board Section 319 grant funded in 2003, The Marin County Stormwater Pollution Prevention Program (MCSTOPPP) has taken the lead on implementing this program in Regional Board regions 1 through 3. This grant has made it possible to bring OWOW to 250 retail stores with the assistance of local coordinators. In our area, the Public Education coordinator is the main point of contact. The purpose is to educate and provide the public with less toxic integrated pest management alternatives (IPM). MCSTOPPP's goal is to have every county in California involved in OWOW to help reduce residential pesticide use in communities.

The OWOW display program comprises 1.79% of the total education budget. The Program Coordinator will be responsible for the upkeep and restocking of OWOW flyers and point-of-purchase (POP) tags in stores, and will act as the area contact for store owners. Additional duties include: update the OWOW website staff with information on behalf of the Management Committee, and coordinate with Marin County on all aspects of program.

Participating counties include: Alameda, Humboldt, Monterey, San Francisco, Santa Barbara, Solano, Contra Costa, Marin, Napa, San Luis Obispo, Santa Clara, Sonoma, Del Norte, Mendocino, San Benito, San Mateo, Santa Cruz, and Trinity.

The OWOW website www.ourwaterourworld.org has regional information for the public to access including household hazardous waste drop off centers and contact numbers for the different counties.

Through grant funds Marin county will continue to supply the bilingual fact sheets, shelf talkers, training manuals, and in-store training through March 2006. Marin will also continue to seek grant funds to keep costs down for all of the California counties participating in the program.

Marin County invested grant funds and labor to recruit eight nurseries in the area covered by the MRSWMP. Stores include: Long's – Marina, Cypress Gardens- Monterey, Griggs Nursery – Pacific Grove, Griggs Nursery- Carmel Valley, Brinton's – Carmel, Valley Hills Nursery- Carmel Valley, Ace Hardware – Castroville, Orchard Supply Hardware(OSH) – Sand City.

Each store has had a staff training in order to educate staff about alternative pesticide products. The trainer Annie Joseph, is a qualified consultant who previously worked for pesticide chemical

companies. She is contracted by Marin County to provide staff trainings and training manuals, and place literature racks and POP information in each store in cooperation with store managements and staff.

Every garden store has POP shelf tags that direct the public to safer alternative products. In this way staff can help direct public to the marked POP alternatives and direct them to the information available in the literature stands.

Literature racks with 14 colorful bilingual flyers are displayed in the garden and fertilizer areas of each nursery. The racks include the following flyers: Ants, Aphids, Yellow Jackets, Mosquitoes, Snails & Slugs, Healthy Lawns, Weeds, Wonderful Roses, Healthy Gardens, Use & Disposal of Pesticides, Preventing Pest Problems, Roaches, Spiders, and Fleas. The flyers have the MRSWMP participating entities listed with a contact phone number.

In November 2003, the *San Francisco Bay Area Pesticide Retail Store Survey* was completed. (http://www.ourwaterourworld.org/pub/ow/2003_Shelf_Survey.pdf) Funded by US EPA Region IX, and peer reviewed by the Bay Area Stormwater Management Agencies Association, the San Francisco Bay Area Regional Water Quality Control Board, and the California Department of Pesticide Regulation the study points to some very interesting facts. Bay Area direct phone surveys found that more than half of residential pesticide sales are from two chain stores- Home Depot and Orchard Supply Hardware. The study also found that Orchard Supply Hardware carries the widest variety of pesticide products with over 150. The benefits of implementing this program in these stores is actually two-fold: 1) a large number of consumers are reached by displays placed in these stores, and 2) stores that allow OWOW displays to be placed in their stores typically stock a much larger number of less toxic alternative products.

Over the past ten years, the Bay Area Stormwater Management Agencies Association and the California Stormwater Quality Association (formerly the California Storm Water Quality Task Force) have been very active both at the state and federal level on behalf of local agencies statewide, in issues related to organophosphate pesticides. While local government and others must deal with the effects of these pesticides on listed waterbodies through TMDL's, they have no direct authority to regulate pesticides or their use. Education is the only effective way to change people's behavior related to the use of pesticides, and this proven program is the best way to get the word out. One measure of the effectiveness of both this program and concentrated work by many Bay Area organizations with lawmakers at EPA headquarters in Washington, D.C. is the fact that diazinon and chlorpyrifos are both currently being phased out of production and sales for residential uses. This program will continue to evolve as new and different pest control products are introduced.

The measurable goals for this activity will be to keep track of the numbers and topics of flyers distributed in each store and totals will be tabulated for the annual report. It is unclear at this time if the group will be able to obtain sales information from the participating stores. If that information is available to the group, it will be used to help measure the overall effectiveness of the program.

3. Our Water Our World "OWOW" Outreach Events

The Program Coordinator will participate in a minimum of two "tabling" events at selected garden stores. This outreach method comprises 0.96% of the total education budget. Duties include: distributing press releases to garner attention for OWOW events, interacting with the public at events, and distributing information and magnets with the OWOW website.

Events will be scheduled in cooperation with store management in order to maximize the outreach effort. One example of a recent successful effort is OSH in Sand City which has "no

sales tax" weekends two to three times per year in order to boost sales. We will attempt to schedule outreach tabling events to coincide with these weekends. One on one interaction with the public at these events has proven to be very successful in measuring immediate results. The day to day interactions between store staff and customers is not easily measured, but one recent tabling event showed that one on one interaction on this topic was very effective. As many as 60 people at that event made a decision to buy a less toxic alternative than the one they had planned to purchase.

OSH serves many of the communities within the area covered by the MRSWMP and has a large amount of foot traffic. In addition to speaking with the public, colorful magnets with the OWOW website will be distributed to the public.

Measurable goals will include tabulating the number of people who purchase an alternative product, the name of the products purchased, comments on the program, and the number of magnets distributed. These numbers will be tabulated for the annual report.

4. Restaurant Training

The Program Coordinator will train the Resource Issue Education Specialist from MBNMS to fulfill this program aspect. This targeted outreach method comprises 0.84% of the total education budget. The Program Coordinator will accompany the Resource Issue Education Specialist on a minimum of four to five restaurant staff trainings. Following these initial staff trainings, the Resource Issue Education Specialist will continue the outreach in order to reach seventy-five restaurants in the first year. This outreach will target restaurants located within the area covered by the MRSWMP which are closest to watersheds and the Sanctuary.

To accompany the bilingual restaurant BMP poster adapted from the City of Los Angeles, a bilingual video was produced by the City of Monterey to address the same BMP's on the poster. It targets BMP's such as proper mat washing techniques, cleaning up spills and targets kitchen staff. Within the area covered by the MRSWMP many kitchen staff are Hispanic and speak little or no English.

The restaurant video was made in response to a survey taken of over 100 restaurant managers in the City of Monterey. The survey asked what tool would help them train their revolving staff about proper procedures to reduce urban runoff pollution. Many of the managers suggested a bilingual video that would address proper techniques that they could use for staff training.

Outreach is accomplished by making an appointment with the manager to bring the video to a meeting of the kitchen staff. The bilingual video is approximately seven minutes long in each language. The video depicts five proper BMP techniques to reduce urban runoff. Following the video a bilingual survey is given to each staff member. Upon completion the surveys are returned to the Program Coordinator. A bilingual poster for the kitchen and bilingual brochures "Monterey Begins On Your Street" are left with the manager to distribute.

The restaurant video is being used outside the area covered by the MRSWMP by the cities of Watsonville and Santa Barbara. The Clean Green Business Program modeled after Palo Alto's successful program is in its startup phase in Santa Cruz and Monterey Counties. Through print

ads and media attention the program recognizes businesses that practice green methodologies such as: water and energy conservation, waste reduction, storm water pollution prevention techniques, and recycling. The program staff has expressed interest in using the restaurant video for this program.

Measurable goals include tabulating the number of restaurant staff reached through surveys and the number of posters, videos, and brochures distributed.

5. Bilingual Radio Ads

The Program Coordinator will book the award winning bilingual "Dirty Word" radio ads on selected radio stations. This outreach method will comprise 32.63% of the total education budget. Duties include: booking radio ads with each station, creating station promotions, literature distribution, and obtaining statistics on the number of people reached through each station.

Radio reaches the most people and *targeted audiences,* and is the most cost effective mass media for the number of persons reached. The top six radio stations have been selected due to the demographic audience they reach. Below is a chart of the number of persons listening five minutes or more, based on a two month period.

Station	Persons Reached	Station Demographics
KDON	82,400	Males & females 18-49: Largest signal on the central coast
KTOM	61,000	Males & females 20-50: country western station.
KCDU	59,200	Females 20-30
KWAV	55,200	Females 35-40: Popular station at workplace
KPIG	45,600	Mostly male audience / 400,000 hits per month on website
KLOK/KSES	39,700	Largest Hispanic stations -reaches 6,500 people/15min.

Total Outreach: @ 319,000 people over a two month period

The bilingual "Dirty Words" radio ad campaign focuses on storm drain pollution.
Dirty Words has aired sporadically over the past four years with small funding sources, but never over a long time period due to lack of funds. In order to stretch out the run time of radio ads, they will be spread out over a few months and not run all at once over a two month period.

In April of 2000, the Dirty Words radio ad campaign was honored with the Golden Addy Award in both English and Spanish for the best radio campaign in Central California. Original music and outstanding voiceover commands the 60 second radio spots. The ads were written by Maris Sidenstecker with funding and creative input from MBNMS, and the cities of Monterey and Watsonville. The radio campaign with ads in both English and Spanish began airing in 2000 throughout the Monterey Bay region on all the major English and Spanish language stations. The thrust of "Dirty Words" is to educate the general public about storm drains and their connection to rivers, creeks, streams and ultimately the Monterey Bay National Marine Sanctuary. The focus of the spots is to correlate water pollution with urban runoff, and the preventive measures one can do. Motor oil recycling locations or the1-800-CLEANUP number are given at the end of each ad.

The four Dirty Words already produced include Storm Drains, First Flush, Motor Oil, and Cigarette Butts. The ad running time will be staggered to reflect seasonal events and stretch out

air time. “First flush” will be played in anticipation of upcoming storms to educate the public about the first big rain of the season (typically September – October). Cigarette butts will be played in September for National Coastal Cleanup Day, which takes place the 3rd Saturday of every September. One of the leading sources of beach litter is cigarette butts, which are collected during Coastal Clean Up day.

Radio stations enjoy this campaign and have come up with creative venues in the past to reach the general public. One successful example is radio DJ’s requesting the dirtiest car be brought to a radio station event to receive a free car wash coupon. Stations are also willing to distribute bilingual brochures and literature at their outreach events and thus help promote the outreach effort.

The Dirty Words campaign has been adapted by the following counties: Humboldt, San Mateo and Santa Clara. Humboldt created a Dirty Word spot about mercury pollution. San Mateo County adapted the radio ads into TV Public Service Announcements using the same voiceover as the radio spots. Santa Clara is running the same TV ads in their county.

Measurable goals will use the formula used by the radio stations to calculate the number of people reached per station, as well as the number of ads run, literature distribution, and radio ad promotions to further extend the attention for this outreach venue.

6. Bilingual Bus Ads / Print Ads

The Program Coordinator will book bus ads that serve Monterey County. This comprises 9.50% of the total education budget. This is a cost-effective method for reaching the general public.

Ten buses will display “queen size” ads of the adapted bilingual storm drain poster on the side of the bus and run throughout the year. The bus route for Monterey County serves the area covered by the MRSWMP. In the past, the City of Monterey has purchased one month of bus ads, and the ads stayed up almost a year. When advertising space is not purchased the bus company leaves the storm drain ads up due to their colorful nature and the important message. Statistics garnered by the bus company provides the following exposure numbers:

10 buses x 360,000/month = 3,600,000* Total Impressions
Based on 12 cars per minute per bus being on the road, 10hrs. per day/ 7days per week.

The effectiveness will be measured by the bus company formula used to calculate the number of people reached per ten buses. These numbers will be totaled for the annual report.

7. Bilingual Movie Ads

The Program Coordinator will book movie theatre preview ads with the cinema advertising agency, and keep track of the movie attendance data provided by the theatre. This work comprises 4.22% of the total education budget. This is another very cost effective education strategy to reach the general public.

The bilingual movie theatre preview slides utilize the same design as the storm drain poster and the bus ads. This helps reinforce the regional continuity of the campaign. The ads will run in each of the screens in the selected theatre and appear for several seconds on a rotation of slides

shown before the movie. Along with the storm drain message and beautiful artwork, there will be the logo of the MRSWMP and contact information.

To maximize the outreach effort the ads will be booked to run in summer and winter for approximately 24 weeks. These two seasons are the heaviest movie going seasons and will maximize the outreach potential.

Summer (June 15- Sept.15) and winter (November 15- Feb 15) attendance for the six screen Galaxy theatre in the City of Monterey reaches about 198,000 people (9,000 per week in summer and 7,500 per week in winter) and serves the major percentage of the communities covered by the MRSWMP.

Two other significant theatres are the Northridge (14 Screens) and Century Park (7 screens) which would reach approximately 31,500 people in summer and 26,250 in winter. In order to expand the outreach effort ads will be run for 2-3 weeks in summer. In addition efforts will be made to try to secure additional funding from the City of Salinas to extend the run time.

In addition, the City of Santa Cruz has been running the ads in their local theatres over the past two years. This expands the regional recognition of the campaign beyond the area covered by the MRSWMP.

The effectiveness will be measured by the theatres calculating their box office attendance per week. Their statistics will be used to tabulate to total number of people reached. This will be presented in the annual report.

8. Events

Five events per year will be done in order to interact with the public using the hands-on Enviroscape storm water model and distributing educational materials. This outreach strategy will comprise 3.58% of the total education budget.

The Program Coordinator will attend the following regional events representing all of the program participants: Good Old Days (Pacific Grove), Blues in the Park (Seaside), Monterey Cutting Day (Monterey), Whale Fest (Monterey), Kid Fest or the Monterey County Fair (Monterey).

When available the MBNMS educator will also assist with the outreach events. Volunteers will be engaged to help with events and interact with the public.

The effectiveness will be measured by the number of people reached by counting the number of brochures, posters and coloring books distributed. These numbers will be calculated for the annual report.

9. Hands-On Storm Drain Display

This outreach task comprises 1.19% of the total education budget. The Program Coordinator will contact display locations, stock and check on the display at its location, and move the exhibit to other locations on a rotating basis.

Modeled after the stationary storm drain model at the Monterey Bay Aquarium this portable hands-on storm drain model was purchased by the City of Monterey. It depicts oil spilling

through a stenciled storm drain grate. The handle on the grate lifts up revealing an educational message about urban runoff. A brochure stand attached to the model distributes Monterey Bay Begins On Your Street brochures.

This is a great stand alone educational stand that is placed in libraries, museums, DMV's, and used for outreach events.

Measurable goals will include the number of number of brochures distributed at each location and the locations where the display is placed during the year. These numbers will be totaled for the annual report.

10. Logo Development

This task comprises 3.18% of the total education budget. The Program Coordinator will work with a local graphic design firm to create a logo for the MRSWMP. The logo will be used on all printed educational materials, and press releases. This will give visual recognition for the MRSWMP permittees, who will be referred to in the logo as the "SEA" (Stormwater & Education Alliance).

The logo will be the key to kicking off a unified program that is recognizable throughout the permit area. A press release will be sent out once the logo is final so that the group can begin getting the word out about the program.

An example of the logo will be included in the annual report as well as a copy of the press release.

11. Printing of Educational Materials

This outreach task comprises 15.12% of the total education budget. The Program Coordinator will be responsible for placing regional print orders for the educational materials. To cut down on printing costs other neighboring cities beyond this group will be asked to participate, thus saving money for all entities. Additional duties include distribution of the printed materials through various education strategies and targeting local businesses such as kayak, dive, and automotive stores with brochures and posters.

Other entities using the educational print materials on a regular basis are: cities of Watsonville, Santa Cruz, Salinas and the MBNMS.

The educational materials will be used for school outreach, events, and targeted outreach listed above. These items will be tabulated under their specific outreach methods and reported in the annual report.

12. BMP Brochures

This outreach task comprises 1.19% of the total education budget. The Program Coordinator will work with the City of Monterey to adapt the following BMP's for the MRSWMP. The logo will be placed on the brochures before printing.

The BMP's will be available for distribution through individual City departments, targeted mailings, and Monterey County offices.

BMPs for Commercial Industries:

Automotive Maintenance & Car Care

Food Service Industry

BMPs for Construction Industry:
Earth-Moving Activities
Fresh Concrete & Mortar Application
General Construction & Site Supervision
Heavy Equipment Operation
Painting & Application of Solvents & Adhesives
Roadwork & Paving

BMPs for Gardeners, Homeowners, and Landscapers:
Car Care for Do-It-Yourselfers
Home Maintenance Tips
Home Repair & Remodeling
Landscaping & Gardening
Pest Control Tips

The effectiveness will be measured by counting the number of BMP brochures distributed. These numbers will be reported in the annual report.

13. Record keeping

This task comprises 7.16% of the total education budget. The Program Coordinator will be responsible for keeping accurate records of the various outreach strategies listed above. This will provide data for the annual report.

14. Effectiveness Measurement
This task comprises 5.68% of the total education budget. The Program Coordinator will be responsible for analyzing the outreach strategies based on such measurements as:

- Record keeping and surveys from targeted audiences
- Calculating the numbers of persons reached through radio and bus ads using media methodologies
- Responses from school and restaurant surveys
- The numbers of people reached through outreach events

The results will be presented in the annual report.

15. Publicity / Press Releases
This task comprises 1.19% of the total education budget. The Program Coordinator will be responsible for sending out press releases to garner attention for events the public can attend or participate in.

Copies and numbers of press releases will be reported in the annual report.

16. Miscellaneous Materials
This task comprises 2.91% of the total education budget. The Program Coordinator will be responsible for having banners made for outreach activities, and investigating costs of other needed materials as they arise throughout the program.

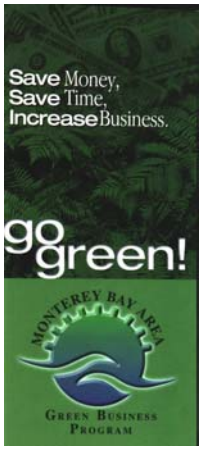
17. Insurance/ Mileage/ Office Supplies

This will comprise 1.14% of the total education budget. The costs will be reported in the annual report.

Fitting this Program into the Monterey Bay Regional Framework:
Various educational efforts are already underway or are beginning in the Monterey Bay Region. This group is aware of those efforts and already participates with other groups in many ways.

- In the Fall of 2003, a large Proposition 13 grant was awarded to Santa Cruz County to implement large scale education efforts around the Bay. The Program Coordinator for this group was a part of the grant-writing team and will be responsible for implementing the 25% of the grant dedicated to education. It is anticipated that the money from the Proposition 13 grant will be pooled with money from this group to energize a successful radio, bus, and print ad campaign.

- For the past three years a group of agency representatives from various local and state government agencies in Monterey and Santa Cruz County have worked to get the Monterey Bay Clean Business Program started. On Earth Day, April 24, 2004, the County of Monterey certified its first automotive businesses into the program. This program mirrors other existing Clean Business Programs across the state and is assisted by staff of the California Department of Toxic Substances Control. The Monterey Bay Area Green Business Program is a successful partnership of environmental agencies and utilities that assists, recognizes and promotes businesses and government agencies that volunteer to operate in a more environmentally responsible way. To be certified "green," participants must be in compliance with all regulations and meet program standards for conserving resources, preventing pollution and minimizing waste. We offer motivated businesses and agencies an easy-to-use framework for improving environmental performance. The Counties are the lead agencies with City staff providing assistance during the certification process. The Clean Business Program is a purely voluntary program for businesses, providing the benefit of advertising and use of the Clean Business program logo for those who are certified. Currently the program covers automotive repair facilities, with plans to expand the program to the food service industry next.



Monterey Regional Storm Water Participants Group
Public Education and Outreach Program 2004-2005

Program Activity	Target Audience	Measurable Goals
1. Elementary School Outreach Two hands-on visits per 24 schools 48 school visits with MBNMS.	Schools 4-6 grade students	1A. Reach 480 students per 24 schools and 960 with MBNMS. Students will be given pre- and post-visit surveys to measure effectiveness.
2. Our Water Our World (OWOW) In partnership with Marin county Offers safe pesticide alternative literature in English and Spanish.	General Public	2A. Upkeep of 8 literature racks in garden stores. Restock the 14 flyers and count the number distributed through: Ace, Brinton's, Long's, 2 Grigg's stores, Cypress gardens, Orchard, and Valley Hills nursery.
3. OWOW outreach events Minimum of 2 events per year	General Public	3A. Calculate the number of brochures and magnets to people at garden store events.
4. Restaurant BMP training video (Bilingual)	Restaurants	4A. Visit 75 restaurants in partnership with MBNMS. Staff will complete a bilingual survey after viewing the bilingual BMP training video.
5. Bilingual Radio Ads	General Public	5A. Will reach @ 319,000 people via six stations. Will use statistics of radio stations for final numbers.
6. Bilingual Bus Ads / Print Ads	General Public	6A. Per 10 buses 3,600,000 impressions are calculated based on the formula used by the bus company.
7. Bilingual Movie Preview Ads	General Public	7A. In the Monterey theatre complex approximately 198,000 people will view the ad, and in the Salinas theater complex approximately 10,000 people will view the ad.. Based on the formula used by movie ad agency.
8. Events: 5 per year in order to distribute materials and interact with the public.	General Public	8A. Calculate the number of brochures, posters, coloring books distributed at regional events: Good Old Days, Blues in the Park, Whale Fest, Monterey Cutting Day, Monterey County Fair.
9. Hands-On Storm Drain Display	General Public	9A. Will be exhibited in at least 3 locations such as: libraries, museums, DMV's.
10. Logo Development	General Public	10A. To garner visual recognition for the MRSWPG. Logo will be printed on education materials.
11. Printing of educational materials: Storm Drain Posters	General Public	11A. Educational materials distributed to the public, schools and businesses will be tabulated.
Monterey Bay Begins…brochures	General Public	
Coloring books	Schools	
Automotive BMP poster	Automotive	
Restaurant BMP poster	Restaurants	
12. BMP Brochures Targets the below topics: Automotive, construction, car care, food service industry, gardeners, pest control, and home construction.	General Public	12A. Logo will be added to existing electronic version which will be adapted for the MRSWPG. Cities and county will distribute from their offices and mailings. Numbers of brochures distributed will be calculated.
13. Record Keeping	General Public	13A. Keep detailed records for annual report.
14. Effectiveness Measurement	General Public	14A. Evaluate education strategies for annual report.
15. Publicity/ Press Releases	General Public	15A. Tabulate the number of press releases in first year.
16. Miscellaneous Materials	General Public	16A. Materials needed to support outreach strategies.
17. Insurance/Mileage/Supplies	General Public	17A. Record and reported in annual report.

YEAR 1: DETAILED EDUCATION PROGRAM

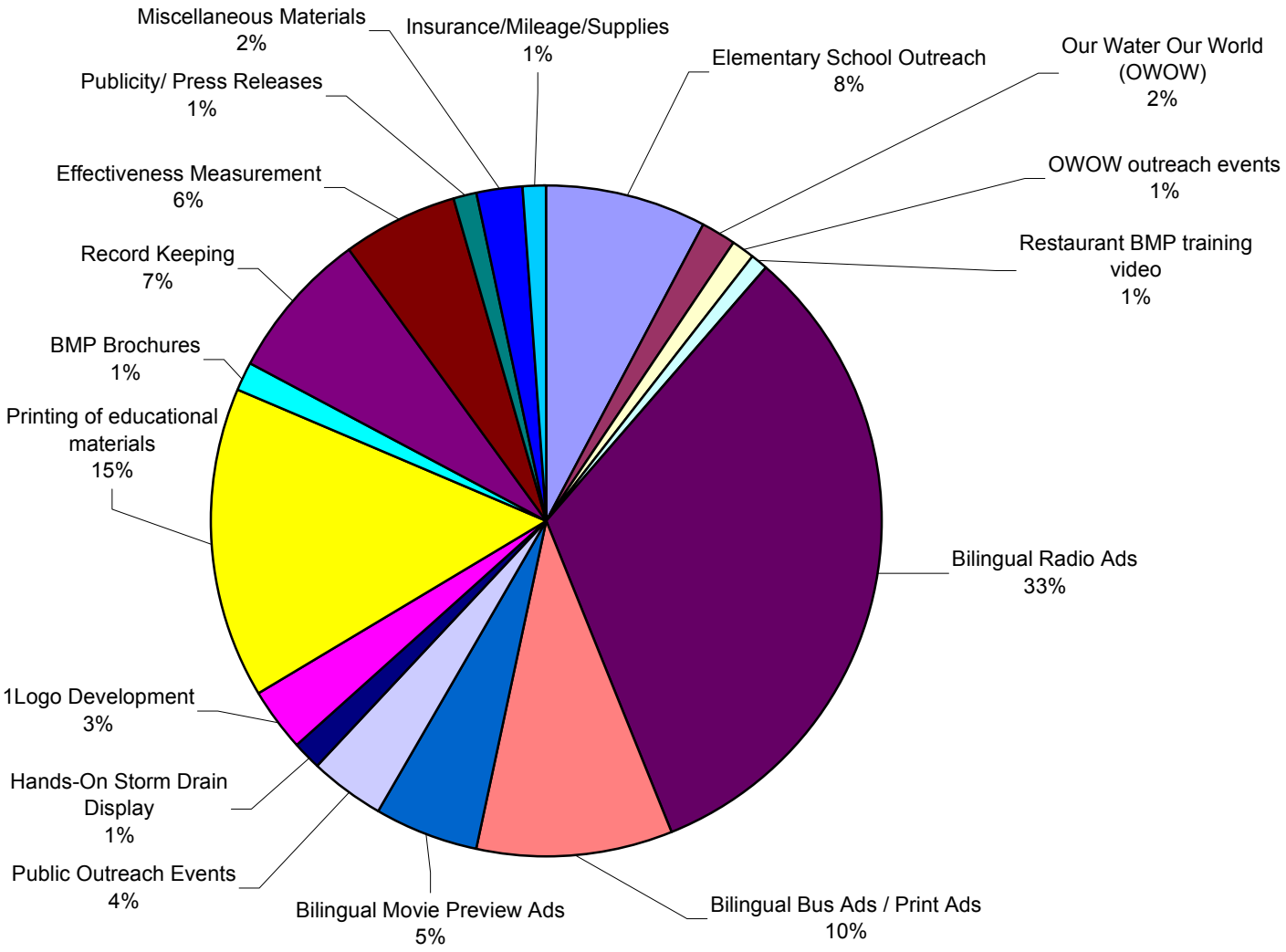
Category No.	Category Description	Details	Public Ed. Coordinator Hours	Time: % of Total Public Ed. Coordinator Hours	Materials: % of Total Materials Cost	Total % of Budget	Comments
1	Elementary School Outreach	Elementary Schools: 24 visits per year	129	19.13%	see printing below	7.70%	* Approximately 120 additional hours per year will be contributed by the Marine Sanctuary toward this activity. There is no cost to the group other than materials costs.
2	Our Water Our World (OWOW)	OWOW Upkeep	30	4.45%	see printing below	1.79%	
3	OWOW outreach events	OWOW Outreach Events	16	2.37%	see printing below	0.96%	
4	Restaurant BMP training video	Restaurant Training: 75 per year (Lisa through MBNMS agreement)	14	2.08%	see printing below	0.84%	* Approximately 400 additional hours per year will be contributed by the Marine Sanctuary toward this activity. There is no cost to the group other than materials costs.
5	Bilingual Radio Ads	Bilingual Radio Ads	40	5.93%	51.60%	32.63%	
6	Bilingual Bus Ads / Print Ads	Bilingual Bus Ads/Print Ads	20	2.97%	14.18%	9.50%	
7	Bilingual Movie Preview Ads	Bilingual Movie Ads	20	2.97%	6.52%	5.01%	
8	Public Outreach Events	Events: 5 per year distribution of ed. Materials (Good Old Days, Cutting Day, County Fair, etc.)	60	8.90%	see printing below	3.58%	
9	Hands-On Storm Drain Display	Hands On Storm Drain Display	20	2.97%	N/A	1.19%	
10	1Logo Development	Logo Development	20	2.97%	3.39%	3.18%	
11	Printing of educational materials	Printing of educational materials: Posters, Brochures, Coloring Books to be used at educational events	40	5.93%	21.73%	15.12%	
12	BMP Brochures	BMP Brochures: Originals are electronic, logo to be added, phone numbers to be revised, printing is $0.30 per copy	20	2.97%	see printing below	1.19%	
13	Record Keeping	Record Keeping, "Research & Development"-new programs, Annual Report Preparation	120	17.80%	Misc. materials	7.16%	
14	Effectiveness Measurement	Effectiveness Measurement- Survey or other methods, Training	95.2	14.12%	Misc. materials	5.68%	
15	Publicity/ Press Releases	Publicity/Press Releases	20	2.97%	Misc. materials	1.19%	
16	Miscellaneous Materials	Miscellaneous materials: stenciling, banner, etc.	10	1.48%	2.58%	2.11%	
17	Insurance/Mileage/Supplies	Insurance/Mileage/Office Supplies		0.00%	N/A	1.14%	
		TOTALS	**674.2**			**100.00%**	

* A part-time educator will be provided through the Monterey Bay National Marine Sanctuary. Committed to 20 hours per week.

Total=1040 per year. This time will be used for additional school outreach and restaurant outreach activities.

Half of this time is dedicated to storm drain stenciling in the various municipalities, under BMP 2-2.

CHART SHOWING BUDGET BREAKDOWN BY ACTIVITY



Appendix F

Public Participation and Involvement Program

Monterey Regional Storm Water Management Program

Public Participation and Involvement Program
For
Fiscal Year 2004-2005

Background

Urban runoff has been identified as one of the leading causes of water pollution across the nation. Involving the community in understanding and preventing pollution is critical to creating the "water quality ethic" that is essential to having an effective Stormwater Management Program. Involving the public, creating community buy-in, and changing individual behaviors are the goals of the regional Public Participation and Involvement Program (hereinafter referred to as the "Program").

The Monterey Regional Storm Water Pollution Prevention Program (MRSWPPP) is being developed and implemented by nine entities including the County of Monterey, the Pebble Beach Company, and the cities of Carmel, Del Rey Oaks, Marina, Monterey, Pacific Grove, Sand City, and Seaside. Each of these entities has submitted a Notice of Intent to comply with the State of California's National Pollutant Discharge Elimination System General Permit No. CA "Waste Discharge Requirements for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems. Within the context of the Memorandum of Agreement that created the MRSWPPP, these agencies have formed a management committee to develop a unified program that can be implemented region-wide.

A Management Committee comprised of representatives from each of these nine entities administers the MRSWPPP, and the Monterey Regional Water Pollution Control Agency (MRWPCA) serves as their Program Manager. All of the entities are located next to or in close proximity to the Monterey Bay National Marine Sanctuary (MBNMS), the nation's largest marine Sanctuary, which encompasses over 5,300 square miles of ocean along the California Central Coast.

Introduction

The permittees of the MRSWMP collectively support this Program, the second of six measures being developed. The Regional Permit Group began meeting in March of 2000 to study the feasibility of having a unified program and to develop the framework for this group. Over the past two years the Management Committee has met once a month to develop the program selecting Best Management Practices (BMP's) to be included in the MRSWMP. Under the Public Participation and Involvement Program two BMP's were selected for the group to implement. BMP 2-1.a states that the group will "Encourage general public and stakeholder involvement in identifying and solving storm water management problems by holding two publicly advertised Public Involvement Workshop per year." BMP 2-2.a states that the group will "Encourage general public participation in programs and activities designed to promote understanding and awareness of storm water pollution, such as cleanup events and restoration activities." This language represents a simplified version of the overall program, which is detailed below: BMPs 2-1.a and 2-2.a are intended to be implemented

during each year of the 5 year permit term. This Program is written to detail what will specifically be implemented in year one of the permit period, it is anticipated that minor changes to the Program may be necessary in future years.

This Program will build upon existing programs, activities and events to further the messages of the SWMP especially tying in with the Public Education program. This program will allow the public, business groups, and other community organizations to put pollution prevention knowledge into action.

It is anticipated that this Program in conjunction with an effective Public Education program will influence and change behaviors leading to a reduction in storm water pollution. Many of the activities discussed in this program are already in place, some were developed and are implemented by the permittees, and some will be a cooperative effort headed by other groups that the cities either are or will be involved with in the future.

Several of the components of the Program were developed or adapted for the Model Urban Runoff Program (MURP) which was completed in July of 1998. MURP is a comprehensive how-to guide developed for local governments to address the issues of polluted runoff in the urban environment. The MURP provides options to help small municipalities develop their own urban runoff program for the Phase II process. The guide incorporates the essential elements of a strong urban runoff program with examples of ordinances, best management practices, illicit connections, new development and redevelopment, commercial and industrial facilities, reporting forms and education and outreach. The MURP was prepared by the City of Monterey, City of Santa Cruz, MBNMS, California Coastal Commission, Association of Monterey Bay Area Governments (AMBAG), Woodward-Clyde Consultants, and the Central Coast Regional Water Quality Control Board with money from a State 319 (h) grant. Many other local municipal agencies acted as peer reviewers throughout the development of the MURP through semi-annual meetings of the AMBAG Stormwater Task Force, now known as the Monterey Bay Stormwater Information Exchange.

Program

BMP 2-1.a states: ”Encourage general public and stakeholder involvement in identifying and solving storm water management problems by holding two publicly advertised Public Involvement Workshop per year.”

BMP 2-1.b explains that Workshop #1 will be held annually in July or August, prior to Annual Report development to explain the Phase II Permit objectives and to solicit public input on the success of the current BMPs and Measurable Goals. Workshop #1 will include an overview of the Phase II Program, and the MRSWMP. It will provide a forum for soliciting public input on the current program and for developing future changes to the MRSWMP to continually improve the effectiveness of the program.

BMPs 2-1.c and 2-1.d explain that “Workshop #2 will be held annually in March or April. The Workshop #2 held in permit Year 1will focus on general Phase II requirements and BMPs to increase overall public awareness and knowledge of the Phase II program. The Workshops #2 held in the subsequent four permit Years will target specific audiences and

associated contaminants of concern. Examples of potential target audiences include: restaurants; automotive industry; contractors – painters, landscapers, roadwork; designers – architects and engineers; and others that are identified either by municipal staff or through the public involvement process.

For both workshops the number of participants attending and results of any follow-up inspections or assistance to industry will be recorded as indicators of the effectiveness of these meetings. Public notice for each of these meetings will be accomplished in several ways. The Monterey Regional Group plans to create a web site to be hosted by the Monterey County Water Resources Agency. That site will be linked to the web sites of all member agencies except the City of Del Rey Oaks which currently has no web site. A listserve of interested parties will be created to enable the Cities to get the word out further. Additionally a press release will be faxed to local newspapers, radio, and television stations announcing the workshop and inviting the public to participate. For those who do not have email access, a direct mailing of the workshop announcement will be available. For industry-specific workshops an additional effort will be necessary by direct mailing to businesses, representative industry groups, and other associations.

BMPs 2-2.a through 2-2.d encompass several public participation activities, which will be undertaken by the Regional Group.

BMP 2-2.a will "Provide financial sponsorship support for Annual Coastal Cleanup Day in Monterey County or other local beach clean up efforts." BMP 2-2.b will "Recruit volunteers through municipal employee base for Annual Coastal Cleanup Day or other local clean up efforts." Many of the participating entities already support Coastal Cleanup Day efforts in a variety of ways. These BMPs will include a formal financial contribution for the annual efforts among other things. Currently volunteers and staff from most of the group agencies are involved in Coastal Cleanup Day, either as beach captains or as volunteers. Each of the group agencies will advertise for volunteers from among staff members. Among the nine member agencies, there are over 7300 employees.

Each year beaches in Pebble Beach, Carmel, and Monterey are captained for the annual event by volunteer staff members of those agencies. The City of Monterey's Community Services Coordinator provides assistance to the effort by coordinating pickup of the collected trash and recyclables in many of the participating areas and by providing refreshments to volunteers and assistance to the coordinator.

BMP 2-2.c will "Provide support for, or assistance with storm drain stenciling through supplies, volunteer recruitment and dedicating sponsorship hours by MBNMS staff." The Monterey Bay National Marine Sanctuary (MBNMS) has committed to providing a part-time educator who will work with volunteer groups in all of the group jurisdictions to stencil storm drains. Approximately 520 hours per year will be dedicated to public involvement activities including storm drain stenciling.

BMP 2-2.d will "Provide support for, or assistance with volunteer monitoring programs such as Urban Watch, First Flush and Snapshot Day."

The Urban Watch storm drain monitoring program was initiated in June 1997 as a collaborative effort between the Coastal Watershed Council (CWC), the City of Monterey and the Water Quality Protection Program of the Monterey Bay National Marine Sanctuary. The purpose of this program is twofold. First is to serve as a tool for education and outreach to the general community regarding the impacts that the citizens have on local water quality. And secondly, to collect useful data to support local environmental management decisions. This is accomplished through the use of trained volunteers to monitor dry-season storm drain discharges at selected outflow areas from June through October of each monitoring year. In 1999, the City of Pacific Grove began supporting this program and has had volunteer forces working each dry season since.

The First Flush program began in October 2000 as the final monitoring event of the Urban Watch year. The First Flush annual monitoring event occurs typically in late fall in the cities on the Monterey Bay that currently have an active Urban Watch program. The first major storm event of the season, in which there are "sheet flows" of water on the roadways, is defined as "First Flush." The outfalls that have been monitored over the past few years by the Urban Watch volunteers are the sites that have been chosen for this event. These locations are chosen for accessibility, historic data availability, and knowledge of the sites. The goal of this effort is to characterize the first flush storm water runoff that is flowing into the Monterey Bay National Marine Sanctuary. First Flush will continue to be monitored at the sites used for the Urban Watch Program that are most accessible and safest in heavy rain and darkness, the typical conditions for this event.

On April 22, 2000, the Monterey Bay National Marine Sanctuary celebrated the 30th anniversary of Earth Day with “Snapshot Day 2000” - a one-day, Sanctuary-wide volunteer water quality monitoring event. On Snapshot Day, 120 trained volunteers wade into creeks, streams, rivers, sloughs, estuaries, and beaches throughout San Mateo, Santa Cruz, Monterey, and San Luis Obispo counties to test water quality and take a “snapshot” of the condition of the Sanctuary’s watersheds.

Volunteers tested multiple locations on waterways for water temperature, dissolved oxygen (DO), conductivity, turbidity, and acidity/alkalinity (pH). Selected sites are also tested for nitrates, phosphates, and fecal coliform. These water quality “parameters” help to identify the general health of a body of water, potential threats to fish and other aquatic organisms, whether the water is safe for human contact, and potential sources of water quality problems.

Snapshot Day 2000 was designed to increase public awareness of water quality issues affecting Sanctuary watersheds and to emphasize the importance of water quality monitoring and the key role volunteer monitors play in our area. The event was a huge success generating a tremendous response from volunteers, good media coverage, and strong support from local businesses. The data collected on Snapshot Day 2000 reinforced previous findings that some of the Sanctuary’s watersheds face water quality problems.

Local communities have attempted to expand the Urban Watch program to other communities several times over the past seven years. Though it is a volunteer program, Urban Watch takes a large amount of coordination time, accomplished by paid staff and consultants for each City. An average of 200 hours per year has been spent by paid staff in each of the participating

jurisdictions to ensure that the data collected is valid and can be used to indicate trends in potential pollutants. Grant funding has been pursued to expand the program further, and subject to availability of funds and a coordinator, the program will be expanded to other jurisdictions. The data obtained from this program is useful as an indicator of trends in types of pollutants. It incorporates some laboratory analysis, but is chiefly a volunteer kit program. Local cities have been able to use data from the program to target and develop educational programs targeted at specific industries who have been found to contribute pollutants. This collected data can be interpolated across jurisdictions with similar land uses and used to target programs.

Under BMP 2-3.a, a representative from the MRSWMP group will "Become an active participant in the Citizen Water Quality Monitoring Network." The Regional Group will work with the Sanctuary's Citizen Water Quality Monitoring Network to provide support for existing programs represented under its umbrella. A member of the Regional Group will attend Sanctuary Citizen Water Quality Monitoring Network steering committee meetings on a regular basis to be the liaison for the group. Members of the Regional Group will assist with volunteer recruitment for the Monitoring Network's programs through the numerous channels that each agency has, including outreach to and through employee and citizen groups, websites, and newsletters.

Year 1: Detailed involvement program

Activity	Administrator Hours	Staff Cost	Materials Cost
2.b Workshop #1: April-May			
2.c Workshop #2: October-November			
3.a Coastal Cleanup Day financial support			$500
3.b Coastal Cleanup Day Volunteer Recruitment			$900
3.c Storm drain stenciling			$1500
3.d Urban Watch, First Flush, Snapshot Day support			$500
3.e Participate in Sanctuary Citizen Monitoring Network			